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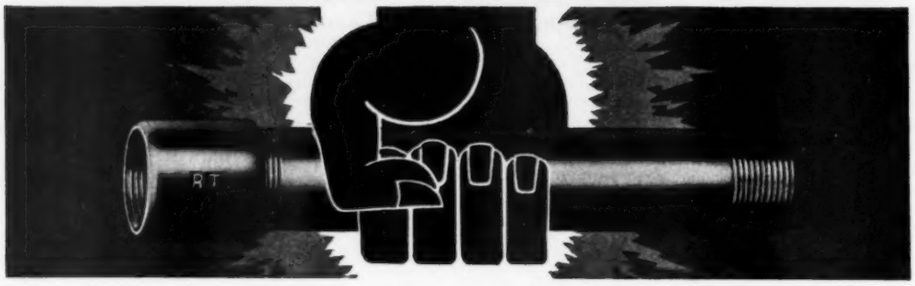

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Oil Industry Now Is in Especially Advantageous Position to Benefit From Business Upturn

By ANDREW M. ROWLEY

CHIEF interest of oil men—producers and refiners alike—is again centered on the special session of the legislature in Texas which is considering a bill proposed to incorporate the market demand provision in the law designed to conserve the State's natural resources. There is little doubt but that the bill will be passed, probably this week, but the petroleum industry is watching developments in Austin closely as, at this time, there is some doubt whether proponents of the measure can muster sufficient votes to attach the emergency clause to the bill. It requires a two-thirds vote to make it an emergency measure, effective immediately upon signature by the governor. Otherwise the new law would not be effective until next February.

With the election out of the way, business men throughout the country are making a careful survey of conditions and preparing to go ahead with plans for the future, regardless of the political make-up of the administration at Washington. In this connection the petroleum industry is in an especially advantageous position to more quickly return to normal conditions. This business has suffered a much less loss of its trade than any of the other major industries, the decline in consumption of gasoline, the chief product, being only about 10 per cent so far this year as compared to 1931. And, it must be kept in mind consumption in 1931 reached the peak since the beginning of the industry. Consequently, an industry which has a drop of only 10 per cent from its peak year is in a position to benefit quickly from any upturn in general business conditions.

Conditions will improve far more quickly if present advantages are maintained. As long as production of crude oil is kept at, or preferably below, the level of requirements, there will not be any slipping backward and the price level will be held. Continued overproduction with a probable consequent lowering of prices would simply tend to lengthen the time required to get back to normal conditions and prices. With business in general girding its loins for a determined onslaught on the depression, it behooves the oil industry to make a real effort at this time to further curtail its production of both crude oil and manufactured products so that it may keep its position at the head of the parade back to prosperity and be among the first of the major industries to enjoy better times.

Leaders of the petroleum industry will meet next week in Houston during the annual convention of the American Petroleum Institute. The keynote of all discussions at that meeting should be optimism.

Crude Oil Production in the United States

Estimated daily average production for the week ending November 5 and a comparison with previous week and one year ago, follows:

	Nov. 5	Oct. 29	Nov. 7, 1931
Oklahoma—			
Oklahoma City	87,185	75,840	189,130
Seminole-St. Louis	104,320	114,720	117,665
Remainder of State	202,810	204,905	227,415
Total Oklahoma	394,315	395,465	534,210
East Texas—			
Lathrop	133,611	131,854	125,813
Kilgore	103,305	101,410	148,610
Joiner	112,197	108,549	144,955
Total East Texas	349,113	341,813	419,378
West Texas	150,787	148,905	195,257
North Central Texas	72,054	72,212	84,297
Texas Panhandle	44,179	44,095	67,481
East Central Texas	49,463	49,361	55,885
Gulf Coast—Texas	128,036	121,987	120,846
Southwest Texas	57,342	57,736	61,890
Total State of Texas	850,974	836,109	1,005,034
Kansas	95,320	96,130	106,130
North Louisiana	29,250	29,285	29,055
Gulf Coast—Louisiana	35,395	34,744	32,455
Arkansas	34,035	34,015	37,745
Eastern Fields	119,000	120,000	122,700
Rocky Mountain area	75,075	74,490	93,735
California—			
Santa Fe Springs	57,750	66,000	60,350
Long Beach	67,500	67,000	74,550
Playa Del Rey	13,500	13,500	22,250
Elwood	13,800	14,000	24,150
Kettleman Hills	59,500	59,000	58,600
Remainder of State	251,950	252,750	255,900
Total California	464,000	472,250	495,800
Total United States	2,097,364	2,092,488	2,456,864

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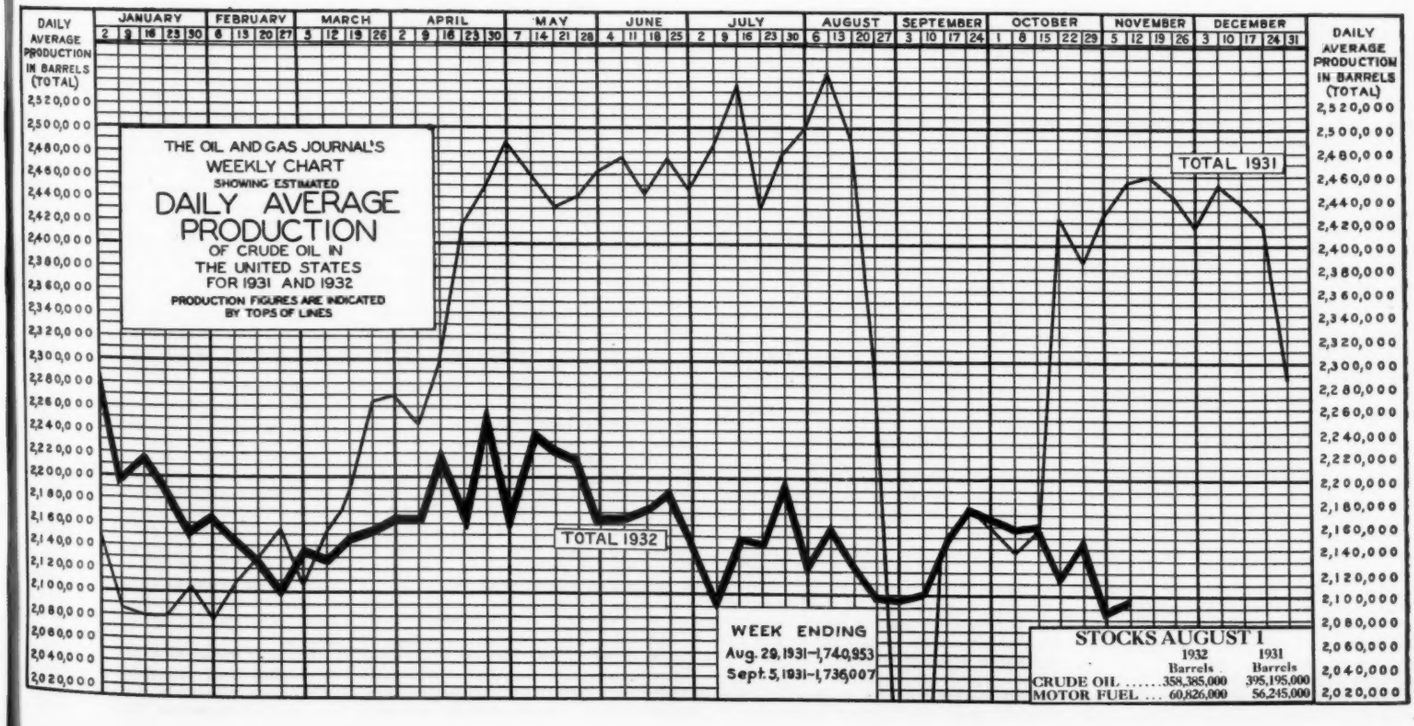


Market Demand Is Feature of Texas Measure; Full Text of Proposed Conservation Bill

AUSTIN, Tex., Nov. 7.—The new oil conservation bill, including market demand, as introduced in the legislature, reads as follows:

"Section 1. That Section 1 of Chapter 26 of the Acts of the Forty-second Legislature, first called session, is hereby amended as follows:

"Section 1. The production, storage or transportation of crude petroleum oil or of natural gas in such manner, in such amount or under such conditions as to constitute waste, is hereby declared to be unlawful and is prohibited. In addition to its ordinary meanings, the term 'waste' shall include:

"(a) The operation of any oil well or wells with a gas-oil ratio exceeding that fixed for such well or wells by order of the commission, and the commission hereby is given authority to fix and determine by order such ratio.

"(b) The drowning with water of any stratum or part thereof capable of producing oil or gas, or both oil and gas, in paying quantities.

"(c) Underground waste caused by the premature intrusion of water into any producing well or wells or into wells producing from the same stratum, resulting from improper drilling or producing methods by the owner of such well or wells.

Gas Included

"(d) Permitting any natural gas well to burn wastefully.

"(e) The wasteful utilization of natural gas, provided, however, that the utilization of gas, lawfully permitted to be produced from a well producing both oil and gas, for manufacturing gasolines, shall not be construed to be wasteful, and provided further that the utilization of natural gas authorized by the commission under the provisions of Section 2 of the Acts of the Forty-second Legislature, first called session, Chapter 26, shall not be construed as wasteful.

"(f) The creation of unnecessary fire hazards.

"(g) Physical waste or loss incident to, or resulting from, so drilling, equipping, locating, spacing or operating a well or wells as to reduce or tend to reduce the total ultimate recovery of crude petroleum oil or natural gas from any pool.

"(h) Waste or loss incident to or resulting from the unnecessary, inefficient, excessive or improper use of the reservoir energy, including the gas energy or water drive, in any well or pool; however, it is not the intent of this act to require repressuring of an oil pool or that separately owned properties in any pool be unitized under one management, control or ownership.

"(i) Surface waste or surface loss, including unnecessary or excessive surface losses or destruction of crude petroleum oil or natural gas without beneficial use.

"(j) The escape into the open air from a well producing both oil and gas of natural gas in excess of the amount which is necessary in the efficient drilling or operation of the well.

Market Demand

"(k) The production of crude petroleum oil or of natural gas where such gas is produced from wells producing gas only, in excess of transportation or market facilities or reasonable market demands, as determined by the Railroad Commission of Texas.

"Sec. 2. The Railroad Commission of Texas shall have no authority to make any rule, regulation or order, or in any wise determine or hold, that any mode, manner or process of refining crude petroleum oil constitute waste.

"Sec. 3. Section 5 of Chapter 26 of the Acts of the Forty-second Legislature, first called session, is hereby amended so that the same shall hereafter read as follows:

"Sec. 5. The commission shall have power and it shall be its duty from time to time to inquire into the production, storage or transportation of crude petroleum oil and of natural gas and the market demand therefor, all in order to determine whether or not waste exists or is imminent. The commission shall have the right to require any party to make and file with the commission sworn statements as to facts within the knowledge or possession of such party pertaining to the production, storage or transportation of crude petroleum oil or of natural gas, and to the market demands therefor, as often and for such periods as the commission may specify, and may require any well or wells under the control of any party, whenever and as often and for such periods as the commission may specify, to be inspected or gauged and the books and records of any party to be examined.

Hearings on Waste

"Sec. 4. Section 7 of Chapter 26 of the Acts of the Forty-second Legislature, first called session, is hereby amended so that the same shall hereafter read as follows:

"Sec. 7. On the initiative of the commission or on the verified complaint of any party producing, storing or transporting crude petroleum oil or natural gas in this state that waste of crude petroleum oil or natural gas is taking place in this state or is reasonably imminent the commission may hold a hearing, at such time and place as it may fix, to determine whether or not waste is taking place or is reasonably imminent and what, if any, rule, regulation or order should be made or what, if any, other action should be taken to correct, prevent or lessen such waste. Notice of such hearing shall be given by the commission as provided by law. At said hearing all parties interested shall be entitled to be heard and introduce evidence and to require the attend-

(Continued on Page 32)

Market Demand Clause of the Oklahoma Law

The Oklahoma oil conservation law of 1915 provides:

"That the production of crude oil or petroleum in the State of Oklahoma, in such manner and under such conditions as to constitute waste, is hereby prohibited."

"That the taking of crude oil or petroleum from any oil-bearing sand or sands in the State of Oklahoma at a time when there is not a market demand therefor at the well at a price equivalent to the actual value of such crude oil or petroleum is hereby prohibited, and the actual value of such crude oil or petroleum at any time shall be the average value as near as may be ascertained in the United States at retail of the by-products of such crude oil or petroleum when refined, less the cost and a reasonable profit in the business of transporting, refining and marketing the same, and the Corporation Commission of this State is hereby invested with the authority and power to investigate and determine from time to time the actual value of such crude oil or petroleum by the standard herein provided, and when so determined said commission shall promulgate its findings by its orders duly made and recorded."

"That the term 'waste' as used herein, in addition to its ordinary meaning, shall include economic waste, underground waste, surface waste, and waste incident to the production of crude oil or petroleum in excess of transportation or marketing facilities or reasonable market demands."

Bill Reported Favorably by House Committee; May Be Approved Before End of Week

AUSTIN, Tex., Nov. 8.—A bill to give the Texas Railroad Commision power to consider market demand and economic waste in issuing its orders to govern oil production in Texas was voted on favorably last night by the committee on oil, gas and mining of the house of the legislature.

The bill was reported favorably without a record vote.

A few amendments were made in committee, the most important providing for proration of natural gas on the demand from each separate field rather than on a statewide basis. Objection to prorating it in the same manner as oil was voiced during the hearings by the Lone Star Gas Co., which said higher rates to consumers might result.

The attitude of the committee showed a marked change from the position of the house at the special session in August, 1931, when the house defeated a market demand amendment to a general proration bill, 91 to 28. In the senate a similar amendment received only three votes.

Amendment Adopted

An amendment by R. J. Long, one of the authors of the bill, was adopted, specifying that the new proration measure should not affect the common purchaser act, the marginal well law or the antitrust laws. The vote on this was 10 to 4. Some committeemen considered it unnecessary.

R. M. Wagstaff, one of the authors of the bill, said he counted on the measure receiving from 97 to 115 votes. The opposition contended, however, that even if enough votes are available for passage, the 100 required to put the law into immediate effect are lacking, and that not many more than 110 representatives will attend the sessions later in the week. Polls taken by both sides Monday were reported as showing many members noncommittal or undecided. Some think the house may approve the bill by Friday or Saturday.

Chairman C. V. Terrell of the Railroad Commission appeared Friday night before the senate as a committee of the whole and said that if no remedial legislation is passed, East Texas wells will run wide open and 1,000,000 bbls. of oil will be wasted, with a complete drainage in less than two years. He said the decision "tearing proration to pieces" must be met and that a market demand and economic waste basis are necessary though, he insisted, the commission is not interested in price fixing. He predicted 10-cent oil with all its ills and huge losses unless the law is corrected.

Mr. Terrell insisted the commission will have at heart the interests of the people alone and will never countenance allowables that will run up the price of gasoline and by-products to unreasonable figures. He said storage, actual waste and importations must be considered with economic waste and market demand in fixing allowables.

"The three judge court said we must give each of the 8,700 wells a test," he said. "And it cannot be done without a run of 500 bbls. each. What would be done with the wells running wide open? It would be a fearful waste."

Underwood Nazro Opposes

Appearing before the senate, sitting as a committee of the whole, Underwood Nazro, senior vice president of the Gulf Production Co. in Texas opposed the bill, asserting that the principle of attempting to fix the price of oil by legislation was wrong and that the producers should accept the fact that the value of oil is determined by the law of supply and demand.

A broad denunciation of attempts to fix the price of crude oil by legislation and of governmental attempts to control prices was made by Mr. Nazro.

"My associates and I," Mr. Nazro said, "have reached the conclusion that the producers of oil can prosper only by accepting the fact that the value of oil is fixed and determined, whether we like it or not, by economic laws of supply and demand."

While voicing opposition to the bill Mr. Nazro stated that the Gulf companies favor "true conservation" of oil as a natural resource, but do not favor schemes, whether voluntary or compulsory "which will have the effect of restricting free operation of the economic laws of supply and demand or that will destroy competition."

He cautioned the senators that "you have a law already under which the Railroad Commission can do everything that is necessary" to prevent physical waste in the production of oil, advised that it is "a point gained that should not be thrown away" and warned that a law permitting consideration of market demand would be subject to an attack on its constitutionality. He expressed doubt such a law could be constitutional, and declared that "it is nothing more or less than price fixing by a governmental agency."

Attempts of other governments to fix prices for other commodities "have all failed with absolutely disastrous results

(Continued on Page 31)

Many Angles to Problem of Placing Retail End of Industry on Sound Merchandising Basis

By C. O. WILLSON

Any discussion of the retail end of the oil business could be made briefer and probably more intelligible if it was handled from the other angle as "to what is right in gasoline marketing?" In the latter, could be included the fact that despite the many bearish statements recently made regarding gasoline consumption, it is still running from 80 to 95 per cent of the peak depending on areas, a situation which is not duplicated by any other major industry and this relatively small decline did not get under way until about a year ago. Some additional decline is in prospect until such time as the production of new motor vehicles offsets the junking of old cars but looking into the future economists see increases rather than decreases in the demand for gasoline and many other petroleum products. In addition despite business conditions, there have been increases in certain classes of gasoline consumption with assured gains for the future.

But marketing organizations are interested in immediate remedies for present conditions rather than the consideration of futures. The assumption that within one or two years, gasoline demand will again show the usual yearly increases does not aid the concern which is trying to outline a program for 1933, that will be less disastrous than the one now being brought to a close and which involves problems other than those incidental to a declining consumption.

Two Viewpoints

This particular discussion is based largely on interviews with sales managers and executives of oil companies in the Southwest and Middle West, including observations by marketers in Canada where conditions relatively are much better than they are in the United States.

These interviews might be divided into two general classes. To one class belongs the viewpoints of sales managers and staffs, which have direct charge of marketing and the second class consists of major executives, economists and others charged with the responsibility of company marketing policies.

The problems of the average sales manager of a refining or marketing organization are immediate. He is told to sell a certain quantity of gasoline and other plant products. Usually he is not consulted as to the volume to be sold. Somewhere along the line of company management a certain output for refineries is decided upon for a given period and the sales departments including tank car, tank wagon and service station divisions, are expected to dispose of the plant output.

The sales manager has no delusion as to what happens. Salesmen are given certain prices and start solicitations. If the company is well established and the quantity to be sold is not excessive the sales efforts may be successful. Over the past few years many companies have had excess material to sell and this is where the trouble starts. A salesman reports to his manager that he has offered gasoline on a certain basis and the prospective buyer comes back with the statement that a competitor has made a better offer. This applies to all types of sales. The sales department may at first refuse to meet the concessions of competitors but if the company has excess material on hand, or in prospect later, prices must be lowered. The net result so far as gasoline is concerned is that markets are determined by distress sales of excess material.

The spot tank car sales between refiners and jobbers which several years ago covered the bulk of the gasoline business has lost a large part of its former prestige although still widely used in contracts. It is with the terms of these long-time agreements involving refiners, jobbers and dealers that marketing conditions have been largely brought to their present unsatisfactory states. It is not always with prices that concessions are brought about, the tools of rentals, advertising, free equipment, etc., often being a more effective device than a straight price reduction in attracting new business to a particular company. Some of these abuses have been outlawed by a Code of Ethics but if statements of salesmen are to be credited the tendency too often has been to follow the letter of the code but by substitutions evade the spirit of its provisions.

Changes in Marketing

In the retail end those in charge of marketing from the bulk station to the consumers' tanks have a long list of grievances. Their gallonage has gone off in both dealer and station accounts and the usual explanation is underselling in one form or another by a new competitor. The concern which built a drive-in station several years ago and enjoyed the bulk of the business of a particular street or section of a city now has competitors on opposite corners and several more up and down the street. Although trends have changed slightly in certain areas in recent months dealers have been given more and more attractive long-time contracts guaranteeing them profits regardless of conditions in regard to loss and profit within the oil industry.

Operations of Price Cutters

In the matter of retail gasoline prices in practically all the large consuming centers of the United States the jobber "price cutters" have become important factors over the past year. After the legitimate dealers of all types from the small jobber to the major distributor had increased per unit costs through duplication of expensive station facilities a few jobbing organizations—usually without previous oil marketing experience—saw the possibilities of cutting out unnecessary expenses and obtaining large volume with small per gallon profits. Buying their supplies from several sources, they have used combination bulk and service stations and other direct methods to get gasoline and other products to the consumer markets with the least possible expense. Their success has been general and they also have contributed to lower price levels.

They were directly responsible for the introduction of third grade gasoline in most of the larger cities and many other points. This gasoline was introduced as a grade to compete with the price cutter. Sold 1.5 to 4 cents under the regular grade gasoline, this motor fuel has been received with favor by a large number of consumers who are more price conscious during the depression than they were when business conditions were on a normal or boom basis. Introduced as the "tail of the dog" in retail marketing it has become the dog in many sections and is another problem to solve in retail distribution.

One angle to this problem is the activity of the gasoline bootlegger. It is claimed that the activity of the price cutters in some instances have been tied in with the evasion of all or part of the state and city gasoline taxes and this fact accounts for their ability to undersell the legitimate distributors. The writer over the past few weeks has asked distributors in several states as to whether gasoline tax evasion was increasing or decreasing in their sections and has received both "no" and "yes" answers. It can be said that there is now a general realization of the danger of this practice and marketers are co-operating with officials in every way possible to stop bootleg operations of all kinds with hopes of final success in several middle western states.

In this connection it is necessary to keep in mind the retail market conditions in regard to motor oils as well as motor fuels. The sale of motor oils has always been the most profitable phase of bulk station and retail station operation. In times past, certain companies were satisfied if they broke even in their gasoline distribution depending on sales of motor oils to return a profit on their entire marketing operations. This was due to the wide margins allowed in the marketing of motor oils.

Change in Motor Oils

Now this phase of marketing also has lost a large part of its former attractiveness. Refiners have sold to mail-order houses, drug stores, chain groceries and the like and the latter have offered package goods at prices from 25 to 75 per cent less than these same refiners were charging at their own stations. To meet this competition many distributors have been forced to offer package goods through stations and their dealer accounts at cut-rate prices. In bulk sales at retail stations many distributors are now offering 15 and 20 cents per quart oils, thus taking away a large part of the former profit when the minimum price for oil was 25 cents. The head of one large distributing company states that the lowering of retail prices for motor oils and the reduction in volume at stations is as much responsible for the unprofitable retail operations in the oil business as the gasoline situation.

An explanation of abuses in oil marketing could be continued indefinitely. It is sufficient to state here that there is hardly a device known to merchandising which has not been resorted to for the purpose of obtaining business. Some concerns have been successful so far as increasing total volume of sales are concerned but few will dispute the accuracy of the statement that for the marketing branch as a whole, sales per unit of distribution have decreased and costs have steadily mounted and this fact more than anything else accounts for the present unsatisfactory conditions. Thoroughly familiar with this situation the salesmen of the oil industry take the position that they are not to blame. They resent the charge that the "oil industry has too many peddlers and not enough salesmen" stating that nowhere has the art of salesmanship been developed to the point where 10 units of a staple commodity can be sold profitably where there is a demand for only 9 and where too many sales organizations are dominated by the sole purpose of volume rather than profits.

Executive Viewpoint

So much for the views of those who are on the "firing line" in the marketing of petroleum products. Back of this line are the executives who have the responsibility of not only determining the sales practices of their companies but in their decisions must take into consideration the broad general principles of company policies involving the production and purchase of crude oil and the operation of transportation and manufacturing facilities. Many incline to the belief that conditions in regard to crude oil and refinery operations including transportation, have dominated the policies of numerous companies over the past few years and fundamentally it is this fact that accounts for conditions in retail markets.

Most observers both inside and outside the oil business in the main agree as to the developments within the oil industry starting at the close of the World War which have brought about the changes in petroleum marketing. This unanimity of opinion does not prevail

(Continued on Page 36)

What Is Wrong in Retail Gasoline Marketing?

The question of "what is wrong with retail gasoline marketing?" which has been uppermost in the minds of marketers for many months is now receiving the consideration of all branches of the industry due to the discussions which have developed over the desirability of advancing posted schedules for crude oil.

Official statements by some of those who have refused to meet the recent crude advances are to the effect that it is not possible to pay the higher schedule for the raw materials of the oil industry until prices paid by consumers for the principal manufactured product are advanced from the levels of the past several months. In the past, little attention has been paid to retail gasoline quotations when posted crude oil prices were discussed, the assumption being that this market would take care of itself and reflect any changes in costs. In many cases, conditions were such that retail quotations were advanced first and these increases were an invitation for higher levels in markets from the posted crude oil schedules at the wells through the refinery and wholesale markets.

Conditions gradually have changed over the past two or three years. It has been increasingly difficult for the marketing branch to pass on to the consuming trade any increase in costs originating in the crude oil producing and refining branches of the industry. Attempts have been made following advances in crude oil prices this year but the efforts have not been generally satisfactory to those who are charged with the responsibility of refining a barrel of crude oil into finished products and then selling these products to consumers at prices which will permit a profit over the many costs that enter into complete marketing operations in the oil business. In the accompanying article several phases of the retail marketing situation are discussed.

Wild Well in the Gulf Coast Area Is Controlled By the Application of Unique Methods

By NEIL WILLIAMS
Gulf Coast Bureau of The Oil and Gas Journal

HOUSTON, Tex., Nov. 5.—One of the most difficult jobs of capping and killing a wild gas well was that recently accomplished by Crown Central Petroleum Corp. in its No. 1-A Sindous in the Mykawa Field, southeast of Houston. A bad sand condition coupled with unusually high gas pressure made the work particularly hazardous and consequently the success of the undertaking has received considerable attention.

This well got out of control while being bailed in. It had been bailed down 300 feet when, without warning of any kind, it gave one big heave and blew the bailer and entire column of mud out of the hole. When an attempt was made to close the flow-line gates it was too late, and the well was making so much sand, and the pressure was so great that the seats of the valves were cut out. Likewise the seats in the master gate were cut out and it was not long before the entire christmas tree was cut off and fell over, leaving only the top of the casing protruding above the surface.

All Possible Precautions

In drilling and in preparations to complete the well all possible precautions had been taken for the protection of the hole against blowouts and it was these precautions which probably prevented complete loss of the well and facilitated its capping. Both the surface and the production strings of casing were cemented to the top and welded together at the top by the use of a swedge nipple slipped over the production string and screwed and welded into the collar on top the surface pipe.

The surface string was 12½-inch, 40-pound pipe, cemented at 787 feet, and the production string was 8⅝-inch, 32-pound pipe, cemented at 4,062 feet. The swedge nipple, which was slipped over the production string and screwed and welded into the 12½-inch collar, was tapered from 12½ inches at that collar down to 9 inches at the point where it was welded to the 8⅝-inch casing. On the blank end of the 8⅝-inch casing protruding above the point of weld there was fitted an 8⅝-inch collar, this being welded to the casing on the outside and brazed on the inside. The original christmas tree was made up and screwed in this collar. As an additional precaution, a slab of concrete 4½ feet square and 6 feet deep was poured around the top and in which tie bolts for clamping down the christmas tree were set. Thus the entire job, with the two strings of casing cemented from bottom to top and welded together at the top and the large concrete slab, was for all practical purposes one piece and probably prevented any blowing out around the casing and cratering.

Sand in the well is at a total depth of 4,121 feet and is one which previously had been passed up by the majority of the tests in the field. Most of the tests have been drilled some distance down the flank of the structure from the present well and have found oil production in a lower sand around 4,800 feet. In a drill stem test of the sand in this well no indications of any big production were given but as the core had shown some oil operators decided to set casing and test. The location is believed to be at the apex of the structure or dome.

50,000,000-Foot Flow

The well blew out on Thursday afternoon, September 1, with a volume of dry gas conservatively estimated at 50,000,000 feet daily and which had a pressure sufficient to lift an 8,000-pound assembly. It ran wild Friday, Saturday and to Sunday afternoon when a first attempt to cap it was made and a christmas tree assembly was stabbed into the casing and clamped down. Pumping of water into the hole to kill the well was started but Monday the sand again cut out the connections and the assembly had to be pulled out. It was not until the eighth day that preparations for the final and successful attempt to cap the well were completed and it was six days later before the job was done and the pumping of water and then mud into the hole started again to kill the pressure. On the eighteenth day the well quit blowing entirely and since then has been standing mudded up.

Unique Procedure

The procedure of capping the well, particularly that part pertaining to the connection of the christmas tree assembly to the casing, was unique in several ways. This involved welding of all connections and pieces while the well still was blowing. However, throughout the welding job, which lasted nearly three days and in which more than 100 feet of weld was made, adequate precautions for the protection and safety of the welders were taken.

Well Successfully Capped

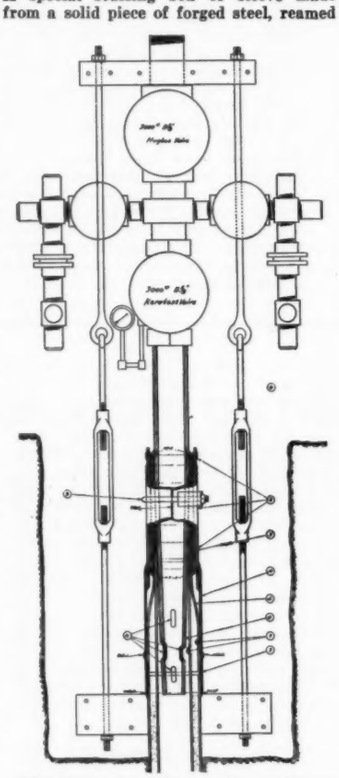
In both attempts to cap the well an H. S. Patton tapered swedge capping tool, similar to those used in capping other wild wells, was fastened on the bottom of the christmas tree. This consisted of a long nipple tapered gradually from 9 inches at the point where it screwed into the christmas tree, down to approximately 5 inches so that it could be stabbed into the casing and lowered to a seat. The failure of the first attempt was largely because the metal in the nipple was not hard enough to stand up until the pressure in the well could be killed. The tapered nipple in the hole tended to obstruct the outlet of the well and at the same time build up a pressure behind the tool inside the casing and also deflect and focus the force of the sand to the point of seating causing leaks to be cut there. These leaks once started rapidly increased in size until the entire assembly was cut out.

In the second and successful attempt to cap the well, the tapered swedge capping tool was specially treated with a well known hardening material which proved adequate to withstand the action of the sand until the assembly could be placed and the proper connections made and the well killed. To facilitate lowering the assembly into the hole, pressure relief holes were cut in the swedge capping tool but even then a large crew was required to hold the christmas tree down until clamps could be attached and fastened.

Two Kerotest and two Hughes valves and gates were used on the Christmas Tree assembly which finally brought the well under control. All these valves and fittings were tested to a pressure of 3,000 pounds.

Getting the assembly over the hole in position to stab it in the casing was a difficult job because of the heavy pressure of the gas. In the first trials efforts were made to swing it over the hole by a cable hung from the derrick but in each instance the force of the sand would cut the cable. By means of a special support, built of pipe, the assembly finally was lifted over the hole and guided into place by "reins," consisting of three joints of 6⅝-inch pipe screwed to each side of the christmas tree flow line gate connections. These later served for pumping mud and water into the well to kill it. During the first attempt to cap the well the derrick was still standing but before the next attempt the derrick was pulled over. It had been badly cut and damaged by the sand and as there was approximately 4,000 feet of drill pipe standing in it decision was made to remove this hazard to the workers.

The method of stopping the leaks around the capping tool when the last assembly was set in place and seated was the most interesting part of the job. A special stuffing box or sleeve made from a solid piece of forged steel, reamed



Hook-up at well head on Crown Central Petroleum Co.'s well, Mykawa Field, Harris County, Texas, showing method of making repairs and bringing the well under control

out to fit around the casing top and the swedge capping tool at the point of seating and then split lengthwise, was provided. After the placing of a rubber packing around the leaks, this split stuffing box was placed around it and clamped tightly with six "U" bolt clamps. After this was done, a complete weld was made, the two sections of the stuffing box being welded together and to the casing and capping tool.

Welding Done by Stages

The welding was done in stages. First, the stuffing box was welded at the bottom, and then the clamps, one at a time, were removed until the two sleeves of the stuffing box were welded from bottom to top. The clamps then were replaced.

Later, after this job was completed, leaks developed around the 12½-inch collar, where the swedge nipple which connected the 12½-inch surface pipe and the 8⅝-inch production string had been screwed in. To stop this another special split sleeve with packing was placed around the pipe from the collar to the first stuffing box and welded in position. These leaks were the result of holes cut in the casing and the 12½-inch to 9-inch swedge due to the deflection of material by relief holes in the first capping tool.

To get at the welding, a part of the cement slab which had been poured had to be chipped out and the welders had to work in the hole which was dug out. The welders did not start welding until it was definitely determined that no gas was leaking through the clamps. Preparations had been made to put out any fire which might have developed. While the welders were at work large hose lines were in readiness to play upon the men in the event of fire. This welding was carried on while the well was blowing through the christmas tree about 10 feet above the point of welding. It was found that the clamps were not leak proof unless the well was blowing wide open and no attempts were made to close the master valves until welding was completed.

Patton in Charge

H. S. Patton of Longview, Tex., a fire fighter who has capped a number of wild wells, was in direct charge of placing the tapered swedge capping tool which was made from specifications furnished by him. All work subsequent to this was under the direct supervision of W. A. Williams, president of Crown Central Petroleum Corp., who was constantly on the job while the well was out of control. Under his direction the Crown staff planned and designed the special equipment necessary. J. L. Johnson, superintendent, and H. A. Campbell of the Crown were given considerable credit for their part of the work, as well as the entire Patton crew which was assisted by the drilling crews, and Mack Lamb and Tom Thompson, welders at the Crown Central refinery at Houston, who did the welding job.

Mykawa is one of the newer geophysically discovered fields, originally owned almost in its entirety by the Humble Oil & Refining Co., which company discovered production and completed several small wells. The field recently was taken over by the Framer Oil Co. and Crown Central Petroleum Corp., who are developing it jointly. In addition to the present gasser, they have completed one oil well and have worked over another, formerly drilled by Humble Oil & Refining Co. Completion of the gas well is waiting the convenience of the operators who will have to set up a new derrick and rig. The present screen probably is cut out and a new string will have to be run and it is not known what damage has been done to casing.

WILL BUILD PIPE LINE

The State Railroad Commission of Iowa has granted permission to the Natural Gas Pipe Line Co. of America to construct an 88-mile natural gas line from the main line at Evans, Iowa, to Waterloo. Work will be started this fall, and although the line was designed primarily to furnish gas to Waterloo, towns and cities in the territory through which it passes will also be supplied from this line.

OIL STATES ADVISORY MEETING

The Oil States Advisory Committee will reconvene at Houston, Tex., November 14 and 15.

Slightly Higher Crude Schedules Adopted by Mid-Continent Refiners During November

By W. T. ZIEGENHAIN

Mid-Continent refiners will not alter their operations greatly during November using their October crude runs as a basis for comparison. Estimated refinery crude runs in this area will total 408,180 bbls. daily in November and in October were 401,995 bbls. This increase of 6,185 bbls. daily is accounted for by slightly higher runs among a large number of plants scattered throughout Kansas, West Texas and East Texas. Despite this higher schedule of runs for November operations will remain considerably below those of a year ago when approximately 480,000 bbls. were run daily.

Four more plants have been added to the list of those idle but the shutdown is announced as temporary in each case. Several small skimming plants are under construction in the East Texas Field and work is progressing on the three new plants being built in Kansas and West Texas.

During the 11 months which will have passed by the end of this month the Mid-Continent refinery schedules have shown marked uniformity from month to month. The highest daily average is shown for June when a total of about 441,000 bbls. were scheduled. The lowest schedule was 402,000 bbls. daily which was estimated for October. Thus the difference between the lowest and the highest schedules for the year approximates only 40,000 bbls. daily. Last year there was a variation between the lowest and highest schedules approximating 140,000 bbls. daily, the peak coming in August when approximately 590,000 bbls. were run daily and the lowest schedule was reported for March when 450,000 bbls. were run. This change to a more constant program of operations throughout the year is significant because it indicates that refiners are tempering their runs to market demands and are not trying to out guess market trends. The present low but consistent average may indicate that refinery operations in the Mid-Continent have reached an "irreducible minimum."

Mid-Continent Refinery Operations

Crude Runs to Stills

	1929	1930	1931	1932
January 1	508,550	535,460	478,795	405,910
February 1	506,800	519,355	470,125	411,280
March 1	514,950	531,500	449,634	401,155
April 1	530,530	555,250	497,391	419,750
May 1	577,500	574,300	510,640	436,160
June 1	583,030	572,250	567,915	440,765
July 1	565,800	548,475	588,840	433,255
August 1	555,250	526,400	590,545	427,710
September 1	552,300	498,710	588,105	430,430
October 1	544,720	518,800	472,190	401,995
November 1	545,473	506,700	480,440	408,180
December 1	540,630	478,360	456,525	.....

Operations by Districts

	November Dy. crude capacity (bbls.)	November Dy. crude runs (bbls.)	Oct. Dy. crude runs (bbls.)	Nov. daily increase (bbls.)
Arkansas	48,000	19,550	20,150	*600
Kansas	156,500	80,400	76,900	3,500
North Louisiana	41,000	25,950	25,950	.....
Oklahoma	309,700	132,950	133,200	*250
North Central Texas	209,800	89,700	89,750	40
West Texas	142,200	35,700	35,050	650
East Texas	70,100	23,840	20,995	2,845
Total	977,300	408,180	401,995	6,185

*Decrease.

Kansas

Kansas refinery operations will also remain practically unchanged. A total daily schedule of 80,400 bbls. has been established, the increase of 3,500 bbls. being due to combining a number of small increases in a number of plants. Another factor is the starting up of operations about November 15 of the Altitude Petroleum Corp. plant near Kansas City, Mo. This refinery was leased for a period of five years and was last operated as the Interstate Rubber Co. This plant was originally equipped to crack oil to produce a synthetic rubber from a portion of the vapors but it has not operated for several years.

Oklahoma

The Oklahoma group of refiners will not revise their total schedule of runs this month compared to October. Two plants have been shut down temporarily but the effect of lowering crude runs in the State due to this is equalized by the slightly higher schedules in a few other plants. One of these plants to shut down was that of the Continental Oil Co. at Sapulpa. The men have been transferred to other plants until operations are resumed in Sapulpa. The other plant to shut down is the York Refining Co. at Oklahoma City.

The Texas Company has also shut down its West Tulsa plant for the first 15 days of November. This will enable minor repairs and construction jobs to be carried on most effectively. Total runs in the Oklahoma refineries for November have been scheduled at 132,950 bbls. daily compared with 133,200 bbls. in October.

North Central Texas

The North Central Texas group of refineries will also operate in November at about the same rate as October. There will be no change in the status of the list of operating and shutdown plants except in the case of the Magnolia Petroleum Co.'s No. 2 plant in Fort Worth. This has been operating at a relatively low schedule and operations for November will be concentrated in the No. 1 plant.

Construction work to cost $700,000 has been announced by the Sinclair Refining Co. as planned for the immediate modernization of the company's Fort Worth refinery. This will include a cracking unit and auxiliary equipment.

West Texas

Practically no change is shown in the scheduled operations of the West Texas refineries during November. A daily schedule of crude runs has been established at 35,700 bbls. which compares with 35,050 bbls. during October.

East Texas

The East Texas refinery runs will approximate 23,840 bbls. daily during November according to schedules established on the first of the month. There are a number of factors which might alter this schedule but the limited market for the refined products will tend to hold runs down to somewhere near their present level. A number of small skimming plants of less than 100 bbls. capacity have been proposed and some are in the building stage but the history of many of these when built in other fields has been that their period of operations was short and the effect on the total refinery operations rather small. Several plants of larger capacity have also been announced including a 400-bbl. refinery to be erected at Kilgore by Callaway Brothers. Another refinery now under construction in that area is the Locke Refining Co. plant. The refinery is being built at Gladewater and will have a capacity of 1,500 bbls. The Southern Oil & Refining Co. has contracted for a 7-mile line from its refinery at Gladewater to the south field.

North Louisiana and Arkansas

The refinery crude runs in both North Louisiana and Arkansas remain practically unaltered and there is no change in the status of the operating and shutdown plants.

REFINERY OPERATIONS IN KANSAS

(Plants which have been in operation during the past year)

Company and location—	Daily capacity	Runs November	Runs October
Altitude Petroleum Corp., Chanute	5,000	(†)	(†)
Barnsdall Refineries, Inc., Wichita	4,000	2,500	2,000
Derby Oil Co., Wichita	7,500	4,000	4,000
Eldorado Refining Co., Eldorado	4,500	2,800	3,000
Golden Rule Refining Co., Wichita	1,500	900	900
Kanotex Refining Co., Arkansas City	12,000	4,200	4,500
National Refining Co., Coffeyville	6,500	5,000	5,000
Phillips Petroleum Co., Kansas City	7,500	7,000	6,500
Shell Petroleum Corp., Arkansas City	22,000	10,000	10,000
Sinclair Refining Co., Coffeyville	12,000	10,000	10,000
Sinclair Refining Co., Argentine	9,500	(*)	(*)
Skelly Oil Co., Eldorado	23,000	11,500	10,500
Standard Oil Co. of Kansas, Neodesha	20,000	6,000	6,000
Vickers Petroleum Co., Potwin	3,500	2,000	2,000
White Eagle Oil Corp., Augusta	15,000	14,000	12,500
Altitude Petroleum Corp., Kansas City, Mo.	3,000	500	(*)
Total	156,500	80,400	76,900

*Shut down, †Operating cracking stills.

REFINERY OPERATIONS IN NORTH LOUISIANA

(Plants which have been in operation during the past year)

Company and location—	Daily capacity	Runs November	Runs October
Bayou State Refining Co., Hosston	750	200	200
Cedar Grove Refining Co., Shreveport	750	750	750
Louisiana Oil Refining Co., Shreveport, Bossier	19,000	17,000	17,000
Spartan Refining Co., Shreveport	10,000	6,000	6,000
Stanolind Oil & Gas Co., Superior	3,500	2,000	2,000
The Texas Company, Shreveport	7,000	(*)	(*)
Total	41,000	25,950	25,950

*Shut down.

REFINERY OPERATIONS IN OKLAHOMA

(Plants which have been in operation during the past year)

Company and location—	Daily capacity	Runs November	Runs October
Altitude Petroleum Corp., Oklahoma City	3,000	600	600
Anderson-Prichard Oil Corp., Cyril	5,000	3,100	3,600
Associated Petroleum Corp., Allen	8,000	(*)	(*)
Barnsdall Refineries, Inc., Barnsdall	6,000	3,000	3,000
Barnsdall Refineries, Inc., Okmulgee	10,000	3,500	(*)
Bell Oil & Gas Co., Grandfield	4,500	2,000	2,100
Black Gold Refining Co., Oklahoma City	1,500	750	600
Capital City Refining Co., Oklahoma City	2,500	(*)	(*)
Century Petroleum Co., Tulsa	500	(*)	(*)
Century Petroleum Co., Oklahoma City	2,500	500	500
Champlin Refining Co., Enid	16,000	7,000	7,000
Continental Oil Co., Sapulpa	10,000	(*)	1,000
Continental Oil Co., Ponca City	30,000	9,000	9,000
Cushing Refining & Gasoline Co., Blackwell	1,800	1,500	1,500
Cushing Refining & Gasoline Co., Cushing	3,500	2,500	3,050
Deep Rock Oil Corp., Cushing	10,000	10,000	10,000
Eason Oil Co., Enid	5,000	3,000	3,000
Empire Oil & Refining Co., Okmulgee	4,000	2,500	2,500
Empire Oil & Refining Co., Ponca City	12,000	6,800	6,800
Garber Refineries, Inc., and Omar Refining Co., Garber	3,500	2,000	2,000
Globe Oil & Refining Co., Blackwell	7,500	6,500	6,500
Gulf States Oil Corp., Oklahoma City	3,500	(*)	(*)
Johnson Oil Refining Co., Cleveland	6,000	4,000	4,000
Major Oil Co., Oklahoma City	2,000	200	200
Mid-Continent Petroleum Corp., West Tulsa	40,000	17,000	18,000
Marathon Oil Co., Boynton	2,500	(*)	(*)
Marathon Oil Co., Bristow	5,000	(*)	(*)
Phillips Petroleum Co., Okmulgee	5,000	3,500	3,500
Producers Oil Co., Bristow	2,500	1,000	1,000
Producers & Refiners Corp., West Tulsa	6,000	3,000	2,500
Pure Oil Co., Ardmore	5,000	1,200	1,200
Pure Oil Co., Muskogee	9,000	7,000	7,000
Rock Island Refining Co., Beckett	5,000	4,700	3,600
Sinclair Refining Co., Sand Springs	8,000	2,300	2,300

(Continued on Page 31)

Laboratory Determinations Indicate a Moderate Gum Content in Gasoline Not Harmful

By S. P. MARLEY, E. C. MARTIN and W. A. GRUSE
Mellon Institute of Industrial Research, University of Pittsburgh*

This paper presents data on preliminary experiments on a study of the significance of gum content of gasoline as related to gum deposits. The results were obtained under laboratory conditions and with experimental equipment and they should not be interpreted as setting directly any gum tolerances for commercial motor fuels. They do, however, point out some significant probabilities as to gum tolerance and they also emphasize what seems to the writers a new importance for one of the principles of engine design.

The work presented comprises:

1. A study of deposits in both intake manifold and combustion chamber when gum content of fuel and manifold temperature were varied, each independently and systematically, all other factors being as constant as possible, in a small single cylinder valve-in-head engine, previously used in this laboratory for carbon deposit studies.

2. A similar study of deposits with essentially the same fuels, in full-size single cylinder engines, one valve-in-head and the other L-head, the manifold temperature being varied over a similar range, the manifolds themselves being designed so as to emphasize the effect of time in the manifold.

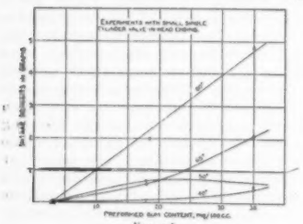


FIGURE 1

3. A limited number of test runs with a fuel of excessively high gum content, in order to observe what would happen under these extreme conditions.

Equipment and Materials

The engine used in the first series of experiments was that employed in previous studies of engine carbon deposits in this laboratory. It is an experimental outfit built around a Delco generator and crankshaft and is provided with a jacketed crankcase, a special lubricating system and all necessary equipment for controlling ignition, load, speed and temperatures. It has been fully described in previous publications.[2, 4, 5] For the present work this engine was provided with an electrically heated straight tubular intake manifold, 8 inches long and 1 inch in diameter, into which a mercury thermometer was inserted for temperature observations. This engine is more controllable and the results can be duplicated more nearly exactly than with the other engines used in this work. The latter, however, showed good reproducibility.

The two engines used in the second series of experiments were single cylinders of full normal engine size and design, one being valve-in-head and the other L-head. The load, which was constant for both throughout at one-third capacity, was absorbed by small dynamometers. The manner of control employed was similar to that for the smaller engine, crankcase and head temperatures and speeds being kept constant. For this work the L-head engine was provided with a down draft Stromberg DX-3 carburetor with reduced throat, mounted 4 inches above a manifold consisting of a 3-inch cubical box welded around the 1¼-inch exhaust pipe, and so located that the center of the box was 3½ inches from the exhaust port. The temperature of the mixture passing through this box was controlled by a flutter valve which served to control the path of the mixture over the heating surfaces. The box is roughly comparable in design and size to a commercial manifold heater, but the time of heating is increased by the fact that the amount of mixture for only one cylinder passes through a heater perhaps large enough to take care of six or eight cylinders. The valve-in-head engine was provided with a manifold in which the time factor was accentuated still more. It consisted of a cylindrical box 4 inches in diameter, 2 inches high, to the top of which at a distance of 3 inches a DX-3 Stromberg down draft carburetor with reduced throat diameter was mounted. At the bottom of the box and directly below the mixture inlet was placed an electric hot plate of the full size of the box. In operation this hot plate reached a very incipient dull red heat. The cylindrical box opened at one side into a rectangular passage 2 inches in cross section by 14 inches long. On the bottom of this box was placed an electrical strip heater 1¼ inches wide and the full length of the box. The current input was controlled to give the desired outlet temperature for the mixture, and the temperature of this strip was much lower than that of the hot plate. A cooling coil of copper tubing was placed at the center of the passage through the box, but it was not used in the work here presented. The outlet end of the box led directly to the intake port of the engine.

The fuels used for the experiments were all normal gasolines as to volatility, having ordinary A.S.T.M. distillation curves, with endpoints lying between 375° F. and 400° F. They were made up by blending the proper proportions of several basic stocks, as follows:

	Gum content		
	Preformed	Oxygen	Copper dish
Commercial refined gasoline	3	15	6
Unrefined vapor phase gasoline—Fresh	4	800	300
Aged in drum, different lots	15–45	600–1,200	300–500
Old pressure still distillate, unrefined	265	....	1,700

Although a study of the significance of the different gum tests as related to engine gum deposits is very desirable, no attempt is made here to discuss this matter except as to one point mentioned below. All the blends were made and all results interpreted on the basis of the preformed gum content; this was determined by a method which is essentially that of Cooke.[3] Fifty cubic centimeters of the gasoline are evaporated in a 3½-inch porcelain dish in a current of steam, the dishes being set in a copper oven, electrically heated to 240° F., heating being continued for a 15-hour period. The dishes are dried at 221° F. in an air oven for one hour and the weight of the residue is multiplied by two to give the gum content for 100 cc. of the gasoline. Oxygen gum values for comparison were determined by a modification of the method of Voorhees and Eisinger.[6] This modification was devised by D. R. Stevens of the Mellon Institute and is as follows: The original method required that the sample of gasoline be oxidized at 212° F. in a 500 cc. round flask closed with a rubber stopper wired in. In this laboratory it was found impossible to get check results on a given gasoline by the given procedure. The rubber stoppers allowed leaks and the rubber was dissolved and disintegrated by the hot gasoline vapor. The portion dissolved was weighed as gum. Vilkas and O'Neil, having experienced the same difficulty,[7] used cork stoppers. This was also tried in this laboratory, but the best results as to reproducibility and convenience were obtained by placing the sample in a 32-ounce ginger-ale bottle and closing with the ordinary cork-gasketed cap, applied with a bottle capper. The gasoline surface exposed to oxidation is the same as in the original test and the volume of the oxygen is somewhat larger. For the copper dish values the A.S.T.M. method 530.1 was used, the dishes being in addition dried in an air oven at 212° F. before weighing.

That the control of blending of different fuels by observation of preformed gum content does not introduce any great irregularities and is a fairly safe guide in this complicated field is evidenced by the fact that the preformed gum content, as estimated above, of the blends has been found to correspond approximately to the values calculated by assuming an aritmetic linear relation. The following experiments will illustrate this point.

	Preformed gum content	
	Calculated	Found
Sample A	..	24
Sample B	..	4
75% A-25% B	19	18.8
50% A-50% B	14	12.0
25% A-75% B	9	7.2

The relations as to copper dish and oxygen gum are more complicated and are not discussed here. While it is true that preformed gum content of a gasoline will vary with time, it will be understood that in this work the values referred to are those at the time of the engine tests; the blends were made as required and the blending was subject to laboratory control.

Both the copper dish gum value and the oxygen gum value are generally understood to reflect to a considerable extent the potential gum value, that likely to be reached on prolonged storage, while the preformed gum value represents simply the gum actually present at the time of test. Several published statements have been made that engine gum deposits are governed by actual gum present at the time of use (preformed gum) rather than by potential gum, although more experimental evidence is desirable. In general the present work supports the conclusion that preformed gum is the important value in engine gum deposits especially as to the relatively large deposits traced in the curves given below, but a small significance for potential gum is not entirely excluded and is even suggested by differences found between the refined commercial gasoline of preformed gum value 3, oxygen gum value 15 and copper dish value 6 on the one hand and fresh vapor phase gasoline of preformed gum value 4, oxygen gum value 800 and copper dish gum value 300 on the other hand. The intake system deposits with lean mixtures and both hot and cool intake temperatures on both the valve-in-head and L-head engine were with the refined commercial gasoline of the order of 0.1 gram, while for the fresh vapor phase gasoline the deposits were in each case of the order of 0.5 to 1.0 grams. Even these values are low and hardly significant compared with those obtained when the preformed gum content is higher (2.5 to 7.5 grams) and the well-known irregularity of gasoline engine results must also be remembered. It would appear that a highly refined and closely reproducible technique might be able to confirm these differences. At present and for the magnitudes considered in this work they are hardly significant.

Since intake temperature is recognized in this work as an important variable in gum deposits, the orientation of the intake temperature employed with those encountered in automobile engines running today, is of considerable interest. Measurements on a six-cylinder engine mounted on the block and provided with fan cooling in addition to the usual water cooling gave figures up to 80° C. (176° F.) for air entering the carburetor and up to 60° C. (140° F.) for mixture after the heater and entering the engine. For road conditions the work of Mock[8] and Brown[1] may be referred to. Mock finds that in winter mixture temperatures may be as low as 27° C. (80° F), in spring 54° to 65° C. (120° to 150° F.), while in summer they will reach 93° C. (200° F.) and under severe conditions as high as 160° C. (320° F.) for short periods. Brown's experiments indicate winter temperatures of 43° to 57° C. (110° to 135° F) and much higher ones in warmer weather—up to 90° C. (200° F.). It will be seen, therefore, that the temperatures employed in this work correspond approximately to those encountered in practice.

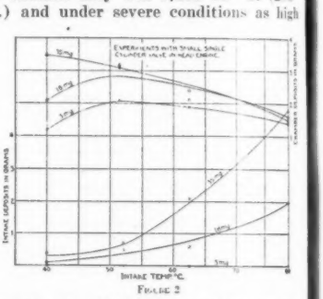


FIGURE 2

In considering the experimental data a certain degree of irregularity will be noticed. That such irregularity is very difficult to avoid is known by anyone experimenting with automobile engines. The work has been performed with care and attention and the results are presented without apology.

Experimental Results

In Series 1, covering experiments with the small carbon deposits engine, each run was for 15 hours. Speed, load, crankcase temperature and head temperature as well as mixture ratio were controlled as in previous published work, and the mixture temperature was varied systematically as described. At the end of the run the engine was dismantled; the combustion chamber deposits and the intake system (including intake chamber, port and valve stem) deposits were scraped and weighed separately. A similar procedure was observed for the experiments in Series 2. A constant quantity of fresh lubricating oil was used for each run in both series; this was a 350 viscosity naphthenic oil of low carbon depositing tendency. The runs in Series 2 were for 25 hours each. All runs in Series 1 and 2 were completed without engine trouble of any kind. For the somewhat exploratory work in Series 3, the method of procedure was essentially the same.

The results for Series 1 and Series 2 are presented in the form of graphs. For the results in Figure 1 three fuels of 3

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18 and 35 mg. gum content, respectively, were used and runs were made at mixture temperatures of 40°, 50°, 65° and 80° C., respectively (104°, 122°, 149° and 176° F.). The air-fuel mixture ratio was constant at 12 to 1. For each temperature one curve has been drawn. In Plate 2 the same results are plotted in a slightly different way; one curve has been drawn for each of the three gasolines, the intake deposits being again ordinates, but this time the temperatures are used as abscissae. In addition to the intake deposits, the combustion chamber or "carbon" deposits are plotted by weight in grams as ordinates against the intake temperatures, one curve again being drawn for each of the three gasolines used.

In Figure 3 the results with the valve-in-head engine (Series 2) are plotted, the intake deposit in grams as ordinates and the gum contents of the fuels as abscissae. In this series four sets of runs were made. The intake mixture temperature was adjusted to 30° C. (86° F.) in one pair and to 90° C. (194°F.) in the other pair. At each temperature a run was made at a 9 to 1 mixture ratio and another at a 13 to 1 ratio. The

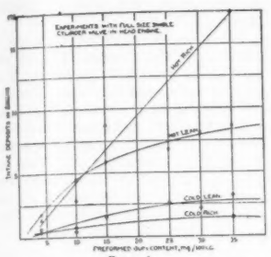

FIGURE 3

curves are labeled "cold rich," "cold lean," "hot rich" and "hot lean," respectively.

In Figure 4 (Series 2) the data for the L-head engine are plotted in a strictly comparable manner, the ordinates and abscissae being the same as above. The temperatures and mixture ratios are the same as for the valve-in-head engine, except that the upper temperature was 80° C. (176° F.) instead of 90° C., and four sets of runs were again made. Only three curves are drawn, however, since the cold rich and the cold lean lines coincide to within the limits of the scale. The rich mixture runs were carried only to a 15 mg. gum fuel on this engine.

The data for Series 3, which are not sufficiently extensive for plotting, are presented below with the discussion of the results of that series.

Discussion of Results

In the two plates giving results for Series 1, the most striking point is the large influence of intake mixture temperature on gum deposits, together with the evidence of reality of gum trouble at the higher gum contents when the mixture is heated to 65° a marked upward for deposits at 40° C. (104° F.) and 50° C. (122° F.) intake temperature are low and flat; even a 35 mg. gum content produces little deposits at these low temperatures. As soon, however, as the mixture is heated to 65° a marked upward slope of deposits with increasing gum content is observed, and at 80° the rate of increase of deposit is very steep. In Figure 2 the corresponding fact is brought out strongly. A 3 mg. fuel gives practically no deposits at any intake temperature tried; the 18 mg. fuel gives increasing deposits at temperatures above 50° C. (122° F.). The 35 mg. fuel gives deposits which start increasing at the same point but rise much higher.

The study of combustion chamber deposits in these runs is also very interesting. With a high gum fuel (35 mg.) the carbon deposit is high if the gum deposit is low, and it decreases as the gum deposit increases. For the 18 mg. and the 3 mg. fuels this is true above 50° C. (122° F.); the cause for the increase of carbon deposit with these fuels up to this temperature is not quite clear. In general, for a fuel of any gum content tried, raising the intake temperature causes more of the deposit to come out in the intake system and less in the combustion chamber. As intake temperature rises to 80° C. (176° F.) the carbon deposit for all the fuels decreases and approaches a common value; apparently practically all the gum has come out in the intake system and the carbon deposit under these conditions is due almost entirely to the lubricating oil. At lower intake temperatures, gum content of fuel seems to have a very noticeable effect in raising carbon deposits.

TABLE 1—SERIES 3

Fuel of 265 mg. Gum in Small Valve-in-head Engine. Fuel Mixture Ratio 12 to 1

Intake mixture, temp. ° C.	53	53	30	30
Time till stopping	3 hr., 50 min.	3 hr., 38 min.	5 hr., 43 min.	5 hr., 10 min.
Intake deposit	1.3	1.9	1.1	0.8

TABLE 2—SERIES 3

Gum content of fuel—	Intake temp.	Intake deposit	Combustion chamber deposit
265 mg.	80° C. (86° F.)	0.53 gm.	8.5 gm.
265 mg.	80° C. (176° F.)	29.60 gm.	6.5 gm.

For the data of Series 2 given in Figure 3 an additional factor has been considered, this being the influence of mixture ratio on deposits. The curves for intake deposit are low and fairly flat with increasing gum content so long as the intake temperature is low; whether the mixture is rich or lean seems to make little difference. If anything, the rich mixture gives lower deposits and this may be due to a washing effect of the wet rich fuel fog in the manifold. But as soon as intake temperature is raised, not only does the deposit increase with increasing gum content, but the effect of mixture ratio becomes noticeable; a rich mixture deposits much more gum than a lean one and the curve of deposits as gum content increases is very steep while that for a lean mixture rounds off more gently.

In Figure 4, on which results with the L-head engine for the same fuels are presented, the same general points are brought out, although for a probable reason noted below, the deposits are of less amount. The lines for the cold rich and the cold lean mixtures coincide to within the scale limits and this line is almost identical with the horizontal axis. In other words, for this set of conditions and with this manifold, fuel of gum content up to 35 mg. per 100 cc. has no appreciable tendency to deposits gum. With a hot manifold, however, and a lean mixture, the deposits are appreciable and increase up to a 20 mg. value; the lower figure obtained as 35 mg. may be real, but the writers feel that it is more probably due to some unrecognized experimental error and the curve should continue to rise gradually. With hot rich mixtures it was possible to continue the experiments only to a 15 mg. fuel; as far as traced, however, the curve rises with increasing gum content and lies higher than that for the hot lean mixture, thus agreeing with results obtained with the valve-in-head engine.

Series 3 includes a small number of experiments with a gasoline of very high gum content. It was a pressure still distillate four years old, and had preformed gum and copper dish gum values of 265 and 1,700, respectively. A series of runs was first made with the small valve-in-head engine, each being continued until the engine stopped itself because of a gummed-up intake valve. When this occurred, the engine was dismantled, scraped and cleaned, and then run again at once under the same set of conditions. Two pairs of runs were thus made in two days, no great change in engine wear or clearances being thus likely. The fuel mixture ratio was held at 12 to 1. In one pair of runs the intake temperature was held at 30° C. (86° F.) and in the other at 53° C. (127° F.). The resulting data are shown in Table 1.

The data in Table 1 show that with a cool intake mixture the engine ran about 50 per cent longer than with a warm manifold and that the intake deposits were with the cool intake only a little more than half as great as with the warm manifold.

Series 3 included also a pair of runs on the same 265 mg. fuel in the L-head engine used in Series 2. Both were for the full 25 hours practised in that series, and in both the fuel mixture ratio was 13 to 1. In one the intake temperature was 30° C. (86° F.) and in the other 80° C. (176° F.). No stoppage was encountered. The results are shown in Table 2.

It will be observed that with the hot intake the deposit in the intake system was excessively high, while with the cold intake it was negligible. At the same time the carbon deposit inside the engine head was only slightly increased by cooling down the intake. This would suggest that although the gum did not deposit in the manifold and probably went on into the combustion chamber, it was very successfully burned out.

In the above discussion it was mentioned that a possible reason existed for the greater magnitude of the gum deposits for the valve-in-head engine. The factor referred to is the possible influence of time the mixture stays in the manifold. The several manifolds built were varied in order to get a range of conditions; as a result the time the mixture remained in the small box manifold of the L-head engine was only about one-sixth of the time in the long manifold of the valve-in-head engine. It is reasonable to assume that a longer exposure would give greater opportunity for deposit of dissolved gum. By way of orientation, it may be mentioned that the linear speeds of the mixture in the two manifolds were about the same and approximately one-eighth those for an eight-cylinder engine operating at 3,000 r.p.m. The time factor for the L.head engine was thus somewhat greater and for the valve-in-head engine much greater than in a commercial engine. In other words the present work errs on the side of severity, and in commercial engines trouble from deposits should not be encountered nearly as soon

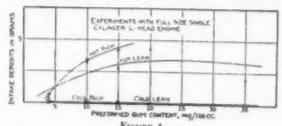

FIGURE 4

as has occurred in this experimental work.

Summary of Findings

Summarizing and drawing simple conclusions, it seems that a moderate gum content can be tolerated in an engine if the temperature of the mixture in the manifold is kept low; as soon as much heat is applied a fuel containing an appreciable amount of gum will begin to deposit this gum, and such deposits are heavier from a rich mixture than from a lean one. The carbon deposits in the combustion chamber are somewhat but not much greater with gum-bearing fuels at low intake temperatures, but the well-known tendency to lower carbon deposits with higher head temperatures could readily be invoked to remedy this difficulty. The use of low manifold temperatures calls for more volatile gasolines. The question of gum tolerance is significant chiefly because of the steady demand for fuels of better antiknock value; these can be supplied by cracking but the products are usually difficult to refine to permanently low gum content values.

Fortunately antiknock value usually improves somewhat as a gasoline is made more volatile. The present work suggests that by lowering intake manifold temperatures, volatile gasolines of moderate gum content might perhaps be used without serious trouble from gum deposits. Such a possibility should be considered in its relation to the application of high antiknock cracked gasolines.

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Bureau of Mines Statistics on Petroleum for the Month of September, 1932

According to reports received by the Bureau of Mines, Department of Commerce, the production of crude petroleum in the United States during September totaled 65,036,000 bbls., a daily average of 2,168,000 bbls. Compared with August, this represents an increase in daily average output of 32,000 bbls.; this was the first increase in crude production since April. The increased output in September was due almost entirely to developments in the East Texas Field as production in both the other two leading producing states, California and Oklahoma, declined, and the increase in the Texas Gulf Coast was virtually balanced by declines elsewhere in the state. The daily average production in the East Texas Field in September was 371,000 bbls., compared with 329,000 bbls. in August. This material increase resulted primarily from an increase in the daily allowable per well, although the gain in the number of producing wells (413 oil wells completed in the East Texas Field in September), was also important. The new coastal fields, Rabbs Ridge and Conroe, continued to grow in importance, their combined daily average output in September being 31,500 bbls.

The increase in crude production and a decline in refinery demand were reflected in the trend of crude stocks, which although it continued downward, showed a tendency to flatten out in September. Thus the net withdrawal from refinable crude stocks in September amounted to only 1,270,000 bbls. compared with 3,375,000 bbls. in August. Due largely to increased demand for fuel oil, stocks of refined products were drawn on more extensively in September than in August. The net decline in total stocks of all oils in September amounted to 7,766,000 bbls., compared with a net decrease of 6,379,000 bbls. in August.

Refined Products

Daily average crude runs in September totaled 2,130,000 bbls., or 40,000 bbls. below August.

Decreased crude runs and a decline in gasoline yield in September were reflected in the daily average output of motor fuel which declined from 1,083,000 bbls. in August to 1,046,000 bbls. in September. The trend in stocks of motor fuel continued downward, the total on hand September 30, 47,933,000 bbls., representing a decline of 4,925,000 from the stocks on hand September 1. The daily average indicated domestic demand for motor fuel in September was 1,122,000 bbls., a decline of 8 per cent from a year ago. Daily average exports of motor fuel in September amounted to 91,000 bbls., an increase of 15,000 bbls. over the daily average in August.

The refinery data of this report were compiled from schedules of 336 refineries, with an aggregate daily recorded crude-oil capacity of 3,564,402 bbls., covering, as far as the Bureau is able to determine, all operations during September. These refineries operated during September at 60 per cent of their recorded capacity, given above, compared with 342 refineries operating at 61 per cent of their capacity in August.

Paraffin Problems Found in East Texas Oil Field and Methods of Prevention and Treatment

By J. M. MacQUARRIE
Production engineer, Shell Petroleum Corp., Kilgore, Tex.*

The crude oil produced in the East Texas Field, as in many other fields, contains a series of waxes commonly called paraffin which are in a state of solution in the oil at present bottom hole temperatures but which may be deposited on the sand face, in tubing, flow lines, tanks and pipe lines, if conditions become favorable for its deposition.

The formation of paraffin in conductors has long been a source of much trouble in the production of oil and to properly control or prevent its formation constitutes a difficult problem.

The accumulation of paraffin in conductors has not, as yet, become a serious problem in the East Texas Field but, as the field grows older and pressures decline, this trouble may be expected to increase.

The depth at which the paraffin is deposited usually ranges from about 400 to 900 feet from the surface. It has a melting point of about 184° F., which is indicative of low solubility.

Three Major Causes

There are three major causes for the accumulation of paraffin in tubing. These are given below in the order of their importance:

1. Temperature drop in the oil.—The solubility of any given solid in a liquid increases with an increase in temperature. This holds true with paraffin in oil. It follows that by decreasing the temperature the ability to hold paraffin in solution decreases until the saturation point is reached where the paraffin begins to precipitate in small crystals. Agitation tends to cause these small crystals to unite, forming larger grains which readily adhere to a rough surface. The chief causes of temperature drop are two in number:

(a) Cooling by gas expansion: When oil and gas flow from the bottom of a well, the oil is cooled as a result of the gas expanding in the upper part of the tubing and doing work in lifting the oil and gas to the surface. The more efficient the flow, with a consequently greater expansion, the greater the temperature drop will be.

(b) Radiation losses: The amount of loss by radiation depends on the rate of flow, the size of conductor and the difference in temperature between the oil in the tubing and its surrounding medium. At low rates of flow, especially in a large conductor, where the upward movement of the oil is slow and the radiating surface large, the drop in temperature from radiation may be the factor controlling the temperature of the oil produced.

2. Loss of volatile constituents.—This favors the separation of paraffin from the oil in two ways:

(1) By reducing the volume of the oil without reducing the amount of paraffin and thus concentrating the solution.

(2) By removing the lighter constituents of the oil which are better solvents of paraffin than the heavier ones.

However, the loss of volatile constituents as a factor in causing the deposition of paraffin is not as important as the loss of temperature but in heading wells, where gas slippage is great or in wells with leaky well head connections, it becomes of considerable importance.

3. Foreign matter.—The presence of fine sand, or silt, in the oil does not affect the amount of paraffin that will separate from solution but does act as a nucleus for the formation of large particles of paraffin which can become readily attached to the surface of a conductor.

Methods of Control

There are two possible methods of controlling the accumulation of paraffin in conductors, i.e., to prevent the separation of the paraffin from solution in the oil or, if separated, to prevent its deposition on the walls of the conductor.

The factors controlling the separation of the paraffin from solution have already been mentioned. In a well of sufficient pressure to maintain steady flow, the temperature can usually be raised by stopcocking to a point which will prevent the separation of paraffin from solution. The temperature necessary will probably be about 90° F., which will require a production rate of approximately 60 bbls. per hour through 2½-inch tubing. It is not necessary, however, that the rate be maintained daily as stopcocking at a high rate of flow, periodically, will raise the temperature sufficiently to increase the solubility of the paraffin in the oil and clean the tubing which has deposited at the previous low rates of flow.

Where the temperature cannot be maintained high enough to prevent the precipitation of paraffin, the highest velocity possible will assist in preventing the paraffin from adhering to the walls and will tend to keep it in a state of suspension until it is removed from the well.

The method of control by stopcocking is not suitable for low structural wells where there is danger of water encroachment and, in these areas, other methods of paraffin removal should be used when necessary.

A heading well makes the control of paraffin much more difficult. The alternate wetting and drying of a surface is very favorable to the accumulation of paraffin. When a surface is intermittently coated with oil, the film of oil on the surface drains away until it is too thin and its movement too slow to carry the gummy particles of wax in suspension and these are deposited on the surface. This condition is aggravated by the fact that the surface of the tubing is usually at a lower temperature than the oil with a consequent cooling effect and also permits a loss of volatile constituents from the thin film.

In a well giving trouble from this condition, the only treatment possible is to attempt to gain steady flow by back pressure, chokes, changing size of tubing, etc.

Accumulation in Flow Lines and Tanks

Accumulation in flow lines can be minimized by avoiding high spots in the line and arranging, if possible, to keep the flow line full of oil at all times. Separators placed close to the well assist but the expense of a separator for each well is not justified in this field. Choking at the well head and abrupt changes from small tubing to large flow lines also favors the precipitation of paraffin. A flow line which is buried is free from abrupt atmospheric changes of temperature but, on the other hand, the beneficial heating from the sun's rays is lost. Probably the better method would be to bury the line lightly, leaving only the top uncovered. This would give a neat appearance to the lease and tend to average the other conditions.

The collection of paraffin in tanks is unavoidable as the temperature of the oil in the tanks cannot be prevented from approaching atmospheric conditions. If, however, a permanent connection is made in the tank to allow agitation before each tank is sold, the paraffin can be run with the oil without exceeding the limit allowed by the pipe line companies. Due to the low rate of accumulation in this field, the use of this preventive measure is of doubtful economic value.

Deposits of paraffin on the sand face has not become a factor in producing the oil in this area. The high formation temperature present may effectually prevent this occurrence. However, when pressures decline, and with low fluid levels, the major part of the gas energy may be used in moving the oil into the hole with a consequent gas expansion and cooling effect and paraffin could be deposited on the sand face and in the pores of the sand. At any rate, the tubing should not be set in a pumping well so that the producing sand can be uncovered unless this is absolutely necessary to gain commercial production.

Methods of Treating

The methods of removal, after deposition may be classified, as follows:

1. Mechanical.
2. Chemical.
3. Operating practices.

1. Mechanical

(a) Scrapers.—The use of scrapers in tubing is a positive method of paraffin removal in tubing. These scrapers can be run on a sand line with a suitable hoist, or very satisfactory work has been done with a light form of equipment run on an ordinary Halliburton line. These light tools consist of a rope socket, stem and paraffin knife, or scraper, of the desired size and weight. An ordinary Halliburton stuffing box is used with a lubricator of the desired length. The Halliburton reel is mounted on a bracket on a car and the tools are pulled from the hole by power supplied by belt drive to a pulley on the car wheel. It is usually necessary, with this light equipment, to spud the paraffin by hand. Many different types of scrapers and knives are used, but probably the most satisfactory is one constructed from thin pieces of steel and notched into each other to form a cross and inserted into the end of a tapered bar and welded in place. Additional blades may be inserted at different angles up the bar to give as many cutting edges as desired. This knife will cut the paraffin loose and it can be flowed from the well at intervals. Care should be taken that the tubing is not allowed to paraffin to too great an extent before treatment as this makes its removal more difficult.

For wells capable of flowing the dislodged paraffin from the hole, scrapers are the most positive and economical method to use.

Pumping wells in the East Texas Field

*Before East Texas chapter A.P.I., Kilgore, Tex., Nov. 3.

Economic Committees' Reports Feature of Institute Meeting at Houston

One of the important features of the annual sessions of the Institute in recent years has been the presentation of independent studies by two groups of economists forecasting demand for motor fuels. Because for the first time there has been an important slack in consumption of motor fuel during 1932, great interest is centered in the reports that will be made at Houston by the Institute's Committee on Refinery Statistics and Economics and by the Volunteer Committee on Petroleum Economics of the Federal Oil Conservation Board. A preliminary draft of the subcommittee of the Institute, headed by Albert J. McIntosh of the Standard Oil Co. of New York, has been completed, and after three weeks of group study members of the committee have returned to their home stations to continue the study until they assemble in Houston on Saturday, November 12, for a final revision. The Federal Oil Conservation Board's committee of five is headed by Dr. John W. Frey of the Bureau of Foreign and Domestic Commerce. Its work is practically complete and will be submitted to the board for approval before Doctor Frey goes to Houston to submit the report to the industry through the Institute. High gasoline taxes has been one of the factors in reducing gasoline consumption, and the committees have given study to that situation in all sections of the country.

The report of the Institute committee that will make forecasts on motor fuel consumption for the six-month period from October 1 through March 1, 1933, will be subject to revision when the subcommittee goes into session and again on Monday, November 14, when it goes before the general committee on refinery headed by D. J. Moran, president of the Continental Oil Co., and vice president for refining of the Institute.

Three principal general sessions of the Institute membership are in prospect for the Houston meeting. Amos L. Beaty, president, will deliver his address, and the reports of the two economics committees by Doctor Frey and Mr. McIntosh will be presented at the opening general session on Tuesday afternoon at 2 o'clock in the ballroom of the Rice Hotel.

Sir John Cadman, chairman of the board of the Anglo-Persian Oil Co., Ltd., will speak on "Oil and Policy" Wednesday afternoon. Sir John arrived in New York on November 2 from his home in London and will remain in the United States until after the Houston meeting. During his stay here he will visit with his son who is a student in Harvard University after spending a year in Texas oil fields.

A general session on Wednesday night will be devoted to production affairs, and Charles F. Roeser of Fort Worth, vice president and chairman of that division, will present a paper reviewing current conditions. Motion pictures and special working models also will be shown to illustrate the efficient and inefficient uses of water drive and gas in free gas cap.

The general sessions and the sessions of the Division of Producing, Refining and Marketing will be held on Tuesday, Wednesday and Thursday, with the annual membership banquet scheduled for the final night when entertainment will be provided through the courtesy of the Houston Wildcats headed by John R. Suman of the Humble Oil & Refining Co. The work of the annual meeting, however, will begin with committees on Saturday and committee meetings will continue through Monday during which all phases of current activities will be reviewed.

"Dubbs cracked gasoline of 71 octane number developed the same power in the DeSoto engine as a straight-run gasoline originally of 61 octane number, raised to 71 octane by adding Ethyl fluid." W V HANLEY, *Oregon State College*
—NATIONAL PETROLEUM NEWS, *Sept. 21, page 27*

Power is what the motorist wants and Dubbs cracked gasoline gives it to him

Dubbs cracked gasoline sets its own new high standards of performance

There is never enough Dubbs cracked gasoline There won't be enough in 1933

Dubbs cracking pays but that won't help you unless you have Dubbs units to do it

Universal Oil Products Co
Chicago Illinois

Dubbs Cracking Process
Owner and Licensor

have given little trouble but for wells of this class steaming, circulation of hot oil, electric heaters, etc., have been used successfully in other fields. When using steam, the usual method is to introduce the steam into the casing and allow the condensate to collect in the well and be pumped out with the oil. Care must be taken while using steam or hot oil that the expansion caused by the heat does not part the casing, tubing, etc.

Paraffin accumulation in flow lines has given but very little trouble to date. When flow lines are free from sharp bends, scrapers can be used but probably the most satisfactory way to treat paraffined flow lines would be with steam, if available, and if not, with gas heaters installed in the flow line near the well to raise the temperature sufficiently to dissolve the paraffin.

The accumulation of paraffin in tanks requires treatment. The mechanical method most effective is to keep the paraffin down by drawing off from the bottom, the amount necessary. If a gravity outlet is not available, a small hand force pump can be used.

Where sand faces become paraffined, such methods as reaming, steaming, electric heaters, shooting or burning with a flame supplied by a controlled gas-air mixture have been used but will not be discussed here.

2. Chemical

There are three types of chemicals available for the treatment of paraffin, as follows:

1. Preventive.
2. Solvent.
3. Pyrogenic or heat forming.

(11) Preventive chemicals constitute the only class of treatment which can be used in both flowing and pumping wells. Several of these products are on the market and have been very successfully used in certain localities.

The action of preventive chemicals seems to be in the coating of the inside of the conductor and also individual grains of paraffin so that it will not adhere to a surface.

The most satisfactory way of using this type of chemical is by lubrication into the casing. The specific gravity must be such that it will settle through the oil to bottom but light enough to be carried off in the flow stream through the tubing. This treatment, when successful has the advantage of keeping tubing, flow lines and tanks clean with one operation.

Considerable success has been attained in this field by using chemical in tubing which has become completely closed with paraffin. In this case the chemical is introduced into the tubing and a pressure of from 1,500 to 2,000 pounds per square inch applied with a small hydraulic hand pump. The well is then shut in for two or three days to allow the chemical to work through the paraffin. The treatment is repeated if necessary until the paraffin plug is penetrated.

In cases where the tubing is badly paraffined, but not completely plugged, treatment through the tubing is not so successful, due to the fact that the chemical cannot be held in contact with the paraffin for a sufficient length of time.

Chemicals can also be used for cleaning tank bottoms. The chemical is placed in the tank, which should preferably contain from 3 to 4 feet of oil, and then rolled with gas. This method of treatment will successfully lower high tank bottoms.

A considerable amount of experimental work is being done to prevent the deposition of paraffin with chemicals and more information on this phase of the subject will be available later.

2. Solvents

True solvents cannot be economically used in flowing wells since the quantities which it would be necessary to use would be too large. It is possible that, in a pumping well, a solvent, such as gasoline or kerosene could be used to clean sand faces.

3. Heat Forming Chemicals

There are several compounds or mixtures on the market for removing paraffin by the generation of heat, some of which react with water to form heat and others consist of two substances which react together when mixed.

This class of chemical is difficult to use in flowing wells due to the quantities necessary, but are of value for cleaning empty tubing, sand faces, etc.

3. Operating Practices

In addition to the beneficial operating practices mentioned previously it is also possible to clean tubing in a well of high potential by flowing through the casing. This raises the temperature of the oil in the tubing sufficiently to dissolve the paraffin in the tubing. This method is contrary to the rules of the railroad commission and cannot be used.

Conclusion

1. The only practical way to prevent the precipitation of paraffin is by a temperature sufficiently high to keep the paraffin in solution.
2. If the precipitation of paraffin cannot be prevented, high velocity is important to keep it from depositing on surfaces.
3. Due to the fact that gas-oil ratios are practically a constant in the field, this has not been previously mentioned. It is, however, important in controlling temperature. The expanding gas takes up heat mainly from the oil and where the amount of gas per barrel of oil is large, this condition is aggravated. It is, therefore, beneficial to keep as low a gas-oil ratio as possible.
4. The loss of volatile constituents should be avoided as much as possible by avoiding heading, leaky well head connections, etc.
5. When tubing is badly paraffined, mechanical scrapers can be used satisfactorily.

In tubing completely plugged it is difficult to clean with scrapers and chemicals can be used successfully.

6. It is important to keep conductors full of oil at all times where possible.
7. Tubing in pumping wells should be arranged so that the sand cannot be uncovered.
8. More experimental work is necessary with chemicals to determine the effectiveness and cost of treatment. This method has the advantage, when successful, of keeping the entire conducting system clear of paraffin.

Acknowledgments

E. S. Durward, Shell Petroleum Corp., Dallas, Tex., and C. E. Reistle, Jr., U. S. Bureau of Mines, authors of papers on this subject which have been freely quoted.

Death of Dr. Sidney Powers Deprives Oil Industry of an Outstanding Figure

The oil industry lost an outstanding geologist in the death of Sidney Powers, Ph.D., of Tulsa, which occurred in a St. Louis, Mo., hospital, on Saturday, November 5, following an operation.

The news of Doctor Powers' death was a great shock to his host of friends and admirers, who held him in high esteem not only for his great ability as a geologist but for his many fine personal qualities.

Doctor Powers had been an official of the Amerada Petroleum Corp. from its inception 13 years ago. He had established an enviable reputation in his profession and was very frequently consulted by fellow geologists, in addition to having the confidence of the corporation with which he had been so long associated.

Doctor Powers had been in ill health for the past four years, but with great fortitude stuck to his work at the head of the geological department of his company.

Sidney Powers was born in Troy, N. Y., September 10, 1890. He graduated from Williams College in 1911; was given his master's degree at Massachusetts Institute of Technology in 1913, and his doctor's degree from Harvard University in 1915. He remained at Harvard as a research fellow until 1916.

Doctor Powers next joined the geological staff of The Texas Company. He was connected with the U. S. Geological Survey when the United States entered the World War. He joined the colors and was made an officer in the geological service, serving in France on the staff of General Pershing. His headquarters were in Chaumont. Doctor Powers had the rank of lieutenant, his immediate superior being Major Brooks, also a geologist, and it devolved upon them to use their geological knowledge in the determination of locations for defense and in weighing the strength or weakness of the position of the enemy.

When the war closed Doctor Powers came to Tulsa and assisted in the organization of the Amerada Petroleum Corp.

As a writer and speaker on petroleum technology, Doctor Powers was widely known. He was a past president of the American Association of Petroleum Geologists and a member of the Tulsa Geological Society, the Geological Society of America, the Institute of Petroleum Technologists, the Society of Economic Geologists and the American Institute of Mining and Metallurgical Engineers.

Doctor Powers was the editor of an important compilation of papers which formed a comprehensive survey of the structure of American oil fields. This publication was authorized at the annual convention of the American Association of Petroleum Geologists a number of years ago and gained very favorable repute. Two volumes were published under his editorship and he was working on the third when illness interrupted him.

Doctor Powers' work as a geologist in the Sabine Uplift region was one of the important accomplishments of his career and he was regarded as an authority on interior salt domes in Texas and Louisiana.

Doctor Powers will be always remembered for his great personal service to fellow geologists. A man of most intense independence himself, he delighted in helping others and more than a few young men were assisted to good connections through his efforts.

Doctor Powers was a member of the council of the Geological Society of America, which was charged with the administration of a $4,000,000 trust fund left to the society by the late Dr. R. A. F. Penrose, Jr., in his will. The council was unhampered in the use of the money outside of the request by the testator that the principal of the gift be used as an endowment and that the funds be devoted to the development of geology. As one of the council Doctor Powers had a plan in mind looking to the possibility of the use of a portion of the large fund in research work to be pursued by geologists, as he figured it would give employment to a considerable number of men thrown out of work by depression in the oil industry, with its overproduction of oil and consequent slowing up of exploration work.

DR. SIDNEY POWERS

Surviving Doctor Powers are his widow, Mrs. Dorothy Edwards Powers and two daughters, and his parents, Mr. and Mrs. Albert W. Powers of Troy, N. Y.

Funeral services were held in All Souls Unitarian Church in Tulsa on Monday, November 7, the Rev. Alfred E. Von Stilli, pastor, officiating. Dr. W. Embry Wrather of Dallas, Tex., pronounced the euology. Geologists and engineers from distant oil centers were among the large congregation. On Monday evening a memorial service was held by the Tulsa Geological Society in the course of which Frank R. Clark, chief geologist for the Mid-Kansas Oil & Gas Co., reviewed the busy professional life of Doctor Powers.

Sir John Cadman Thinks Oil Situation Improving

NEW YORK, Nov. 7.—Sir John Cadman, chairman of Anglo-Persian Oil Co., Ltd., and of the Iraq Petroleum Co., Ltd., who is here to address the American Petroleum Institute annual meeting, November 15 to 17 at Houston, believes the petroleum industry has shown fundamental progress since he spoke here in 1928 urging world oil co-operation.

While stating that economic conditions in general are "about as bad as they could be," he asserted that the oil industry, more than any other, has proceeded to adjust its difficulties. The presentation of a united front by the leading oil companies of the world at the world oil conference this year to correct the unsatisfactory situation in foreign markets was a distinct gain, he said.

Practical conservation of oil, Sir John said, is a plant of slow but steady growth. Oil executives recognize, he said, that their industry is one that transcends all nationalistic barriers. He deprecated the prevalent tendency in all countries to overtax oil, although he said tax collectors are beginning to appreciate that they "can kill the goose that lays the golden egg."

Oil Industry Recovering Says Viscount Bearsted

NEW YORK, Nov. 7.—Viscount Bearsted, chairman of the Shell Transport & Trading Co., Ltd., and a director of many other corporations, visiting the United States for the first time in three years, returned to England last week.

"I should like to compare the present position of the oil industry," he said, "with that of the world in general with one major difference, namely, that the various units in the petroleum field have already reached a measure of co-operation which bids fair to place the industry in a better position than it has been for several years past and make it the first to rise superior to present conditions rather than by awaiting a change.

"We have so far only made a beginning and there is still a great deal to accomplish. In common with all other industries, we were misled by the mirage of a postwar prosperity and equipped ourselves to deal with conditions which have proved ephemeral. We have swallowed this hard fact and are sitting down today to reconstitute the industry in the light of existing things, trying to shape the industry to present demands rather than to present supply."

"No matter what we do," he said, "we cannot get around this basic law. Our principal trouble has been that we have been trying to adjust the demand to the supply, when really it should have been the other way around."

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C. O. WILLSON, Refinery Editor

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Price Fixing

Those members of the Texas legislature who are so concerned lest regulating crude oil production to market demand might lead to excessive gasoline prices are not consistent.

If they believe that prices should be determined by the freest competition regardless of consequences they had an example of it when East Texas oil was being sold at 10 cents a barrel. Is that their ideal?

Any restraint on production is a restriction of competition and therefore, according to their theory, a potential threat of higher prices.

Yet this same legislature a year ago approved the limiting of East Texas production to avoid physical waste, regardless of any effect on competition or prices.

It did this because it realized that there are limits to competition—in this case that whatever higher costs might result from restricting production would be compensated for by avoiding the wasting of the State's natural resources and of the State's revenue from oil production.

Since these restrictions on production and competition are justified by the public interest—although the price of oil advanced from a dime a barrel to a dollar a barrel—(without, it may be observed, a corresponding increase in the price of gasoline) there is a like justification for restricting production to market demand in public benefit.

The public is interested in a reasonable price and an assured supply. Flush, low cost fields are a matter of a very few years at most. If they are allowed to run wide open, their volume and low cost competing with existing higher cost older fields or settled production will sap the life of the industry.

The flood of cheap oil will invade every marketing area bringing prices down below the cost of operation and weakening every existing branch of the industry upon which the public must depend for its permanent supply.

And, speaking of physical waste, overproduction forces large volumes of oil into competition with cheap coal and other uneconomic channels, oil that could bring far more valuable returns to the industry and to the public in other uses.

Oil should be worth, not what it can be temporarily produced for in a flush low cost field, but what will give a living return to the industry at large from year to year. Anything short of that is bound to react against the public interest by lessening the ability of the oil industry to maintain a supply at a reasonable price.

Oil men being forced out of the industry by below cost overproduction reduces that very competition which is considered so necessary for the public protection.

There are other wastes than physical waste of oil. It has been truly said that no greater factor in increasing costs can be conceived than the feasts and famines that follow ordinary competitive development in the oil fields.

Holding production to market demand would stop such wastes, would bring about more efficient and economical production and therefore benefit the consumer, because competition in efficiency inevitably is reflected in price.

All this play about price fixing of which so much is being heard at Austin overlooks the fact that prices are being fixed today, not by the oil industry at large, the permanent business upon which the public must rely for its gasoline and oil products, but by a handful of opportunists intent on temporary profits.

The price of crude is determined by the price received for the products made from it. So long as overproduction of crude leads to the overproduction of gasoline the prices of both crude and gasoline will be distress prices.

That sort of price fixing is depleting the oil reserves of Texas and depriving the State of needed revenue. It is demoralizing the oil business, not only in Texas but throughout the country, and thereby affecting the livelihood of every person even in the remotest degree benefited by the operation of the oil industry and those engaged in it or whose business depends upon it.

There are tangible gains for the public interest that would follow the stabilization of the oil business, as much as and even more immediately than the limiting of production to avoid physical waste.

If it was in the public interest to prevent physical waste of oil surely it is equally in the public interest to have the industry run as a sound business and not as a racket.

This is the immediate issue before the Texas legislators. They can have the price of oil fixed by those who overproduce at 10 cents a barrel, or they can limit production to market demand and have that demand determine the price, with every assurance that any excess in price will start the wildcatter to work and invite competition that will keep the price reasonable.

That is how genuine competition really works, not in taking temporary advantage in selling below normal costs. Excessive profit will always bring competition to correct it, but competition that lives only by cut-throat price-cutting is unworthy of the name.

The price-fixing bugaboo is particularly out of place at this time when everybody is wishing for a reasonable price for anything to sell. That is all the oil industry is seeking. There is no more chance for a runaway market in oil than in tires or automobiles. But if any of these industries was back on its feet it would be a big help to the whole country.

If the Texas legislature permits the regulation of oil production to market demand there need be no fear of price fixing against the public interest. The demand will be subject to approval by the members of the State Railroad Commission elected by popular vote and answerable to the people.

That and the invitation to competition by higher prices will be ample protection to the public interest.

So far as the oil industry is concerned it has long been evident that unless proration did control price overproduction would control price. It has been demonstrated that prices fixed by overproduction are not in the public interest. East Texas proved that a year ago.

The only check on overproduction is proration at reasonable prices determined by market demand.

Competition in efficiency may be the life of trade but competition on a price basis only can be the death of industry.

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DRESSER COUPLINGS DOMINATE

Refinery Gasoline and Natural Gasoline Prices Are Lower in Dull Oklahoma Market

By C. O. WILLSON

A general election coupled with uncertainty regarding the actions of a special session of the Texas legislature was held accountable for a dull period in the Oklahoma (Group 3) market over the past week. Spot trading was extremely slow in the Oklahoma markets, both buyers and sellers appearing willing to stand on the side lines until there were developments which might more definitely indicate the trend in prices for refinery products.

About the only price changes for the week were fractional reductions in some grades of refinery gasoline with a more pronounced weakness in natural gasolines. To meet competition from Pennsylvania, Mid-Continent manufacturers of bright stocks reduced their quotations on all grades 1½ cents. Kerosene also was not as scarce as it was the last week of October and the 41-43 water white grade has again been reduced to a low of 3½ cents.

Of the developments of the week from the standpoint of refinery markets, the calling of an extra session of the Texas legislature is by far the most important. The session, the results of which will be known before the end of the week, was called for the one purpose of passing a new proration law which will cope with the threatened disruption of proration in East Texas and other Texas fields. The new law if passed by the legislature as planned by the administration, supposedly, will give the Texas Railroad Commission authority to restrict the production of East Texas fields in line with the market demand. This would prevent the production of excess supplies and furnish the support necessary for the continued curtailment of refinery operations through the winter months. The alternative is the production of excess crude and refinery supplies which is interpreted to assure a general lowering of all markets. To adequately cope with the present situation it is necessary that the proposed proration bill be passed by a two-thirds majority of the legislature so that it can become effective immediately before certain operators under a decision of Federal Court are in a position to throw open wells owned by the plaintiffs in the case.

Comparisons of Mid-Continent Refinery Operations, Sept.'31-'32*

DAILY AVERAGE PRODUCTION—SEPTEMBER, 1932

	Runs to stills	Gasoline output	Kerosene output	Gas oil distillate	Residual fuel oils	Lubricants	Petrol'm wax, lbs.
Okla., Kans., Mo....	233,900	144,366	16,866	15,800	44,450	5,766	84,000
Texas inland	131,866	81,433	5,400	5,030	40,730	500	9,333
Ark.-N. Louisiana .	50,400	23,633	1,730	5,333	16,900	433	.....
Total	416,166	249,432	23,896	26,163	102,080	6,699	93,333

DAILY AVERAGE PRODUCTION—SEPTEMBER, 1931

Okla., Kans., Mo....	298,633	177,400	20,133	28,566	51,300	7,933	65,330
Texas inland	170,533	91,960	6,466	7,800	57,200	866	9,300
Ark.-N. Louisiana ..	56,167	23,566	1,666	4,166	20,433	530	.....
Total	525,333	292,926	28,265	40,526	128,933	9,329	74,630

STOCKS AT REFINERIES—SEPTEMBER 30, 1932

Okla., Kans., Mo. ...	.....	2,912,000	319,000	1,392,000	2,518,000	572,000	2,590,000
Texas inland	.....	1,528,000	89,000	500,000	2,249,000	75,000	.....
Ark.-N. Louisiana ..	.....	143,000	17,000	115,000	512,000	18,000	.. ....
Total	.....	4,583,000	425,000	2,007,000	5,279,000	665,000	2,590,000

STOCKS AT REFINERIES—SEPTEMBER 30, 1931

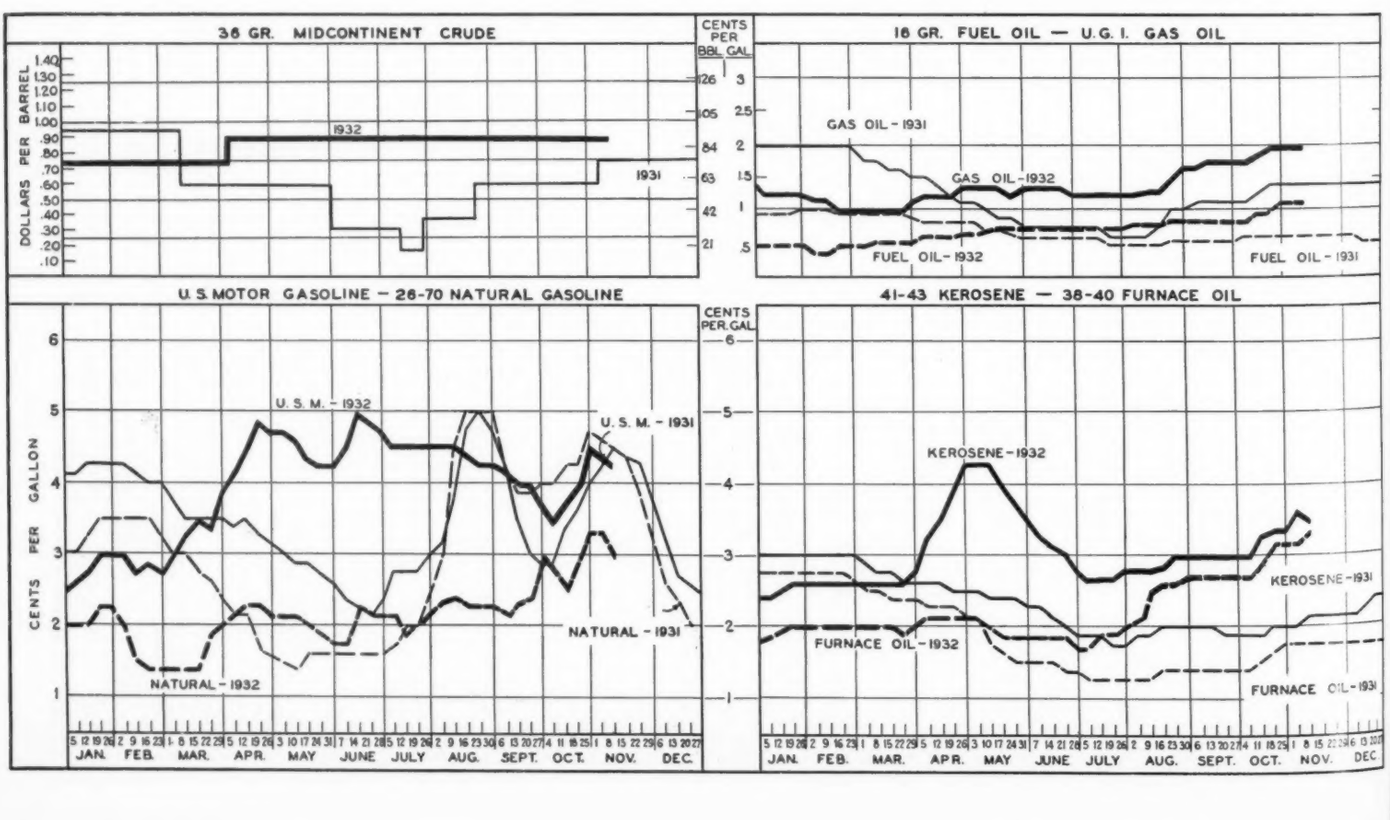
Okla., Kans., Mo....	.....	2,919,000	542,000	3,033,000	3,234,000	525,000	4,839,000
Texas inland	.....	2,084,000	194,000	842,000	3,497,000	80,000	107,000
Ark.-N. Louisiana ..	.....	244,000	22,000	681,000	931,000	15,000	.....
Total	.....	5,247,000	758,000	4,556,000	7,662,000	670,000	4,946,000

*Data in barrels.

Among the opponents of the proposed new proration law is a group of East Texas refiners. They are frank in stating that they do not want proration as it has been carried on in East Texas over the past year. Several of these plants are small topping units which were built in the expectation that large supplies of excess crude oil would be available to plants within the field at low prices that would enable them to compete profitably in any possible developments in the Mid-Continent refinery markets. For the most part, developments in the East Texas Field have not been satisfactory to these operators and they are fearful that the passage of the new proration law would indefinitely postpone any favorable change. With one or two exceptions, these East Texas refineries do not have the modern refinery equipment to compete with other Mid-Continent operators on a basis of quality and plant efficiency. The appeal of their products is largely based on lower prices and crude oil under the prices paid by competitors is necessary before operations can be carried on profitably.

Due to the foregoing conditions refiners throughout the Mid-Continent, and in fact the entire country east of the West Coast, are closely watching the proceedings of the Texas Legislature as an indication of not only what is to happen to their markets during November but throughout the winter months. If present proration plans are continued throughout the Mid-Continent, most refiners are expecting a continuance of at least present prices for their products. They are not expecting an active market in gasoline during the winter months, due to the decline in consumption, but they believe that output has been brought close enough to the demand to prevent the accumulation of excessive supplies which would have to be thrown on the market at distress prices. The market for several other products, if curtailments are continued, is in excellent shape. This applies especially to all classes of fuels and kerosene. If crude production gets out of control in Texas anything is liable to happen as regards prices, but most refiners are not attempting to cross that

Representative Mid-Continent Quotations on Crude Oil and Refined Products Basis Oklahoma (Group 3)


36 GR. MIDCONTINENT CRUDE
DOLLARS PER BARREL
1932
1931
CENTS PER BBL. GAL.
16 GR. FUEL OIL — U.G.I. GAS OIL
GAS OIL - 1931
GAS OIL - 1932
FUEL OIL - 1932
FUEL OIL - 1931
U.S. MOTOR GASOLINE — 28-70 NATURAL GASOLINE
CENTS PER GALLON
U.S.M. - 1932
U.S.M. - 1931
NATURAL - 1931
NATURAL - 1932
41-43 KEROSENE — 38-40 FURNACE OIL
CENTS PER GAL.
KEROSENE - 1932
KEROSENE - 1931
FURNACE OIL - 1932
FURNACE OIL - 1931
JAN. FEB. MAR. APR. MAY JUNE JULY AUG. SEPT. OCT. NOV. DEC.

bridge until it becomes more apparent that it is necessary to do so.

Statistical Situation

The accompanying table was prepared to give a quick comparison between Mid-Continent refinery operations at the close of September and the year previous. It is based on reports of the Bureau of Mines, the latest report of which, covering September operations, was released during the past week. Comparative conditions were not changed materially during October.

In the first place it will be noted that daily crude runs to stills at Mid-Continent refineries are almost 110,000 bbls. less than they were a year ago. This reduction of 20 per cent in the quantity of crude oil refined, which has been representative of comparative operations this year and last, has been the basis for the improvement in the statistical situation in the Mid-Continent area and accounts for the price strength shown in several products over the past several months.

The 20 per cent decline in crude oil runs to stills also covers the approximate reduction in gasoline, kerosene and residual oil output. In the case of distillate and gas oil the decline in output for September this year compared with September last year is more than 30 per cent. Also the production of lubricating oils is almost 30 per cent less than it was a year ago, while the output of petroleum wax is slightly greater.

A comparison of the inventory situation shows the results of these reduced operations and explains the present tight market for several products. Gasoline inventories in the Mid-Continent were higher earlier in the year than they were in the corresponding period in 1931, but the reductions in output made in recent months have changed this situation and at the end of September stocks were 13 per cent lower than the year previous. For the entire Mid-Continent area they are now at one of the lowest points in the recent history of that section. The strong kerosene market of the past several weeks is explained when it is realized that current production is about 80 per cent of last year and stocks are 44 per cent less than they were a year ago.

The same relative situation applies to furnace oil and tractor distillates and gas oil. With production of these oils more than 30 per cent less than a year ago the stocks on hand at refineries on September 30 were 56 per cent less. This accounts for the acute shortage of certain grades of furnace oils and points to a strong tank car market through the winter months. The decline in stocks of residual oils on September 30 was 2,383,000 bbls. or 31 per cent and this fact with a lessened output also points favorably to a better market. In regard to all classes of fuels, the expansion of cracking at refineries as well as the reduced crude oil runs to stills accounts for the reduced supply.

Inventories of lubricating oils which are largely confined to Oklahoma and Kansas are about the same as last year although it is stated that stocks of bright stocks, the most important product, are less. Stocks of paraffin wax are about 60 per cent of what they were a year ago.

The reasonable conclusion to a study of these refinery statistics is that the refining industry in the Mid-Continent has its house in much better condition than usual for this season of the year and with the crude oil situation in hand refiners should not have great difficulty in maintaining profitable prices.

Refined Market Barometer

Although a pre-election dullness in the movement of refinery products was reported from several refining centers during the past week, there were no price changes of a general nature. Gasolines weakened slightly in the Mid-Continent and were not reported strong except in the Atlantic seaboard, where higher prices are predicted. Export gasoline quotations were advanced, due to the improvement in the Rumanian market. Kerosene continues generally firm. Buyers exceed sellers in many sections in the movement of furnace oils and other special fuels at interior points. Natural gasoline lower in the Mid-Continent. Heavy fuel oils unchanged. Bright stock prices reduced in the Mid-Continent and scattered reductions reported in other sections. Paraffin wax prices higher in Pennsylvania.

Mid-Continent—Refinery gasolines and natural gasolines slow and prices lower when any changes made. Kerosene firm in most areas. Distillates and gas oils firm. Good demand for low cold test fuel oils. Bright stock prices reduced on all grades.

East Coast—Better tone to gasoline market and higher prices predicted. Kerosene active and prices firm. Furnace oil movement continues to increase. Fair demand for gas oil and heavy fuels. More inquiries and gasoline prices for export movement higher.

Pennsylvania—Gasoline slow. Kerosene active. Some grades of neutral oils and bright stocks reduced. Wax prices higher.

Chicago—Gasoline market holding despite slow movement. Better outlook for special naphthas. Kerosene firm. Higher prices for most grades of furnace oils.

Gulf Coast—Expectation that East Texas crude oil situation will improve with new proration law improves tone of refinery market although actual demand for all products slow except kerosene, which is strong.

California—Market marking time with little new trading. Prices unchanged.

Natural Gasolines

Natural gasoline quotations are one-fourth cent lower in practically all grades. The 26-70 grade was available the first of the week at 3 cents and in Texas at 2⅞ cents. Prices on the lower vapor pressure grades ranged up to 4½ cents for 11-pound material. The 11 and 15-pound grades were scarce and in fact the weakness appeared to center in the 26-70 grade.

This weakness is said to be due to the uncertainty regarding the trend in refinery gasoline and sellers believe that business will improve later in the month. No large orders were reported in the market over the week.

Gasoline and Naphtha

So little spot trading was reported in the Oklahoma (Group 3) market the first of the week it was difficult to determine the going market. Many refiners are still quoting 4¾ cents on their low octane U. S. Motor with a three-eighths or one-half cent premium on their middle octane material. Their spot sales on this basis are rare. Sales to the trade were reported at 4¼ cents although a limited quantity of resale material was available on Monday and Tuesday at 4 cents. Sellers reported East Texas competition as low as 3¾ cents for low octane U. S. Motor for shipments over part of November.

The high gravity gasolines are not freely offered but the demand is slow and sellers are having difficulty in maintaining quotations. The naphtha market is unchanged.

Kerosene

A week ago kerosene was so scarce in Oklahoma that the 41-43 water white grade was quoted at a low of 3⅝ cents. This week the low has dropped to 3½ cents for sales direct to the trade of specification material. This grade is being quoted and sold as high as 4 cents. The demand is fair.

Furnace Oils

Furnace oils have not been so active over the past week, particularly the prime white grades which are more freely offered. In this week's issue the price on 32-36, zero, low flash furnace oil is advanced to a low of 3⅛ cents which is practically the same price being paid for the higher gravity distillates. This grade is usually classed as gas oil and is shipped on a fuel oil basis rather than the rate for refined oil. This fact and its desirability from the standpoint of furnace oil has brought a demand which far exceeds the supply and prices quoted are nominal.

Fuel Oil and Gas Oil

Both fuel oil and gas oil are firm in Oklahoma regardless of grade. One large buyer of these products has made complaint to the Oklahoma Corporation Commission stating that the demand for these products is not being taken into consideration by the commission in arriving at its decisions in regard to market demand on which allowable crude oil production is based. This buyer and others have not been able to purchase the usual supplies and are seeking methods to increase output at Oklahoma refineries. It is said that some marketers made long time contracts at prices under prevailing quotations.

Lubricants

Mid-Continent manufacturers of bright stock unexpectedly reduced their prices on bright stock 1.5 cents bringing the 150-160 D low cold test grade to 15.5 cents. It is said that the reduction was made to meet the competition of some Pennsylvania grade material sold in competition with the Mid-Continent in certain Middle West points. It is charged that while the Pennsylvania refiners have maintained their bright stock prices in sales within their normal marketing territory they have dumped excess supplies at low prices in other sections. The better grades of steam refined stocks continue firm and are now selling near the going market for the high cold test bright stocks. Wax prices are unchanged.

American Petroleum Institute Weekly Refinery Statistics

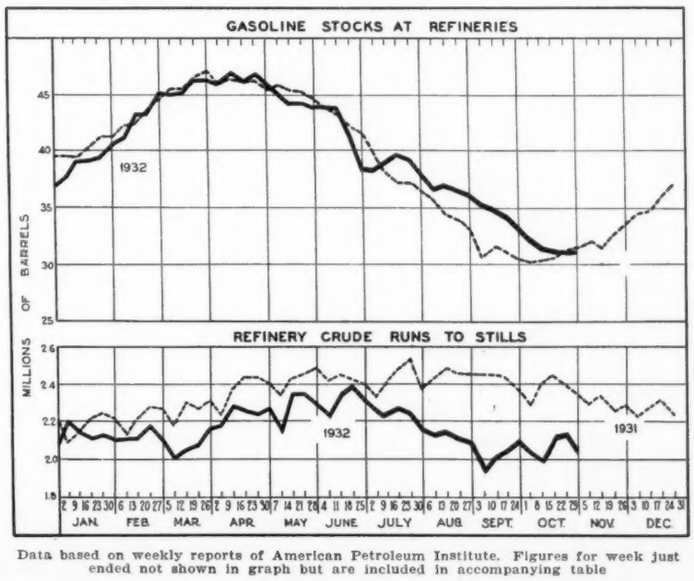
Figures below reported for week by American Petroleum Institute. (1) Per cent refinery capacity represented. (2) Daily average crude runs to stills. (3) Gasoline stocks. (4) Gas oil and fuel oil stocks. All figures in 42-gallon barrels.

Week Ending November 5, 1932, Compared to Week Ago

		Week ending October 29			
		(1)	(2)	(3)	(4)
East Coast	Due to the election day holiday, the A.P.I. report on refinery operations for last week was not available.	99.1	413,000	3,893,000	8,735,000
Appalachian		95.0	86,000	854,000	729,000
Ind., Ill., Ky.		97.5	293,000	2,956,000	4,093,000
Okla., Kans., Mo.		88.4	202,000	2,951,000	2,396,000
Tex. Gulf		98.2	375,000	4,940,000	9,868,000
La. Gulf		97.3	67,000	1,262,000	3,814,000
Inland Texas		72.1	53,000	1,047,000	2,102,000
N. La. and Ark.		94.6	42,000	104,000	530,000
Rocky Mtn.		91.4	31,000	1,150,000	457,000
California		94.6	448,000	12,219,000	100,580,000
Total U. S.		93.6	2,040,000	31,376,000	133,904,000

Week Ending November 5, 1932, Compared to Year Ago

		Week ending November 7, 1931			
		(1)	(2)	(3)	(4)
East Coast	Due to the election day holiday, the A.P.I. report on refinery operations for last week was not available.	100.0	467,300	4,116,000	10,378,000
Appalachian		91.8	85,400	1,319,000	1,668,000
Ind., Ill., Ky.		98.9	302,100	3,183,000	5,647,000
Okla., Kans., Mo.		89.6	234,300	2,633,000	4,896,000
Tex. Gulf		99.8	431,000	4,369,000	8,738,000
La. Gulf		100.0	112,400	719,000	3,059,000
Inland Texas		....	118,000	1,441,000	3,288,000
N. La. and Ark.		....	47,900	111,000	845,000
Rocky Mtn.		89.4	32,400	1,236,000	814,000
California		97.1	463,200	12,944,000	97,717,000
Total U. S.		95.2	2,294,000	32,071,000	137,050,000



Data based on weekly reports of American Petroleum Institute. Figures for week just ended not shown in graph but are included in accompanying table

Chicago Tank Car Markets Withstand Attack; Refiners Determined to Make a Profit

By ROBERT C. CONINE
Chicago Bureau, The Oil and Gas Journal

CHICAGO, Nov. 7.—The gasoline tank car markets in Chicago district Monday had apparently survived an undermining attack at the hands of the group of small refiners who appear to be constantly in possession of a gasoline surplus and in need of ready cash. Refinery buying is reported to have relieved the pressure down in the field. It is interesting to note that a 100-car order on low octane U. S. Motor toward the close of business last week was based on a price considerably higher than the 3⅞ cents, Group 3, named in Chicago district for several days. The buyers were Chicago district marketers whose quotations to the trade are well within the ruling brackets.

Although most of the blending naphtha sources generally base their prices on the ruling gasoline tank car markets, these materials showed a tendency toward weakness and lower prices are heard from Texas refiners. Natural gasolines are reported off at least a quarter of a cent. While reports are current that natural gasoline is moving into Chicago district through the Great Lakes Gasoline Pipe Line, it is understood that the material is to cover requirements of the member companies in their winter motor fuels.

Standard Advances Heating Oils

Standard Oil Co. (Indiana), effective as of November 1, has advanced the Stanolind furnace oil tank wagon markets in Chicago as follows: 36-40 light straw zero, up half a cent to 7 cents; 30-34 straw zero, up half a cent to 6½ cents; 22-26 zero, up half a cent to 5¾ cents; 12-16 zero, up half a cent to 4¾ cents. Quantity stipulations are shown on the Tank Wagon Markets page of The Oil and Gas Journal. Distributors endorsed by the Chicago Oil Heat Institute, who advanced their tank wagon postings on October 15, announced advances on two grades, effective on date of Standard's advance. These distributors advanced their No. 4 fuel (24-26 zero) a quarter of a cent to 5 cents and raised the top of the contract a similar amount to 6 cents; they advanced their No. 5 fuel (18-22 zero) a quarter of a cent to 4¾ cents and raised the contract top to 5¾ cents.

Special Naphtha Outlook

A more optimistic outlook is evident among producers and marketers of special naphthas in Chicago district and the territory. It is time to be thinking of new contracts and in most quarters an advance in the special naphtha tank car markets of at least half a cent, spot business, is expected around the middle of this month. The naphtha tank car and tank wagon markets appear to be in good shape statistically and otherwise, so that unless there is an adverse development within the next two weeks or so there is good reason to believe that these markets will go into the main contracting season with higher price levels throughout the lists. Points such as the Akron rubber district cannot enter into any predictions.

Although representatives of the principal gasoline retail distributing companies operating in the territory estimate that service station and tank wagon gasoline prices in the 13 states are subnormal in about 75 per cent of the points, the probable unexpected continuance of firmness in the tank car markets reflecting a determination on the part of a majority of refiners to make a profit on their operations is expected to discourage the service station price cutter via his jobber.

A significant development which has come well into the open in the last few days is the stand which is being taken by a number of major and semimajor companies toward the price cutting activities of their jobbers and their franchise accounts. These companies now appear to be willing to incur the strong displeasure of these customers by refusing to absorb a portion of the price cut. In some cases, naturally, the major or semimajor authorizes lower prices, but the practice of unauthorized cuts has grown. In this way the jobber has cut his own profits in half only to have the competitor whose price he is attempting to meet post still lower prices. One franchise station last week sacrificed a large part of its Q.D.A. to meet a cut of 1.5 cents made by an independent. The independent promptly responded, and very definitely, by cutting his service station price 4.1 cents. Prices at the service station are such at a large number of points that the operator is losing money even if he is getting his gasoline free and has only to pay transportation, handling, overhead and taxes.

Although Sinclair Refining Co. does not have the distribution in Kansas that other majors have, the advances in this state by Sinclair, effective November 1, are expected to encourage more profitable, or rather profitable, merchandising of gasoline in Kansas. Sinclair's advances were as follows: Regular grade and Ethyl were restored to normal at all the price cut points Sinclair operates in, and the postings on the third grade gasoline were advanced to a point 2.5 cents under the price of the regular grade. While other majors do not appear to be ready to make general advances in Kansas, they have raised their prices at several of the larger points. For the territory mixed trends persist with the third grade gasoline shown active in meeting price cuts.

Price Changes

Service station and tank wagon price changes have been made as follows by Standard Oil Co. (Indiana), at the principal points in the territory: Third grade gasoline — Indianapolis, service station price reduced to 14.3 cents from 15.9 cents, November 2; Minneapolis, service station advanced to 13.4 cents from 10.9 cents, and tank wagon advanced from 11.9 cents to 13.4 cents, November 1; Wichita, Kans., service station advanced from 11 cents to 12 cents, October 29; Fargo, service station advanced from 15 cents to 18.6 cents, October 29; Quincy, service station advanced to 14.9 cents from 12.5 cents, October 21; Bartlesville, service station advanced to 15 cents from 14 cents and tank wagon advanced from 13 cents to 14 cents, October 21; Des Moines, service station advanced from 11.9 cents to 12.9 cents, October 20. Prices on the regular grade gasoline were changed at three of the principal points as follows: Wichita, Kans., service station price advanced from 14.0 cents to 14.9 cents, October 29; Quincy, service station was advanced from 15 cents to 17.4 cents, October 21; Bartlesville, service station was reduced from 18 cents to 17 cents, October 21.

Chicago's Indian summer has stood gasoline marketers in good stead, but recently the favorable motoring weather days have threatened to become a rarity. In general, the weather has performed that unusual task of stimulating heating oil purchases and providing enough "bright" and warm days which are conducive to maximum automobile use under current conditions pocketbookwise to prevent utter gloom during the time the trade is waiting for some encouraging information from East Texas. The favorable weather has benefited Chicago district in another way which is not usually thought of. Indications are that the navigation season will be extended, and it is known that considerable material which might lie on the district heating oil markets is being moved out to the water terminals of the larger companies.

Government Active

It has been reported that the Government is disappointed in the Treasury Department's "take" on petroleum products in August to the extent of about $6,000,000, and information comes from Washington to the effect that the Government is planning an intensive drive to check gasoline transactions and pipe line runs, the latter in connection with the transportation levy. In Chicago district interest is expressed in the possibility that the Internal Revenue Department may concern itself with the activities of those who are alleged to be running crude oil secretly. The fiscal agencies of the Government command a respect in Chicago district which is not commonly accorded. This matter is mentioned because nine out of ten marketers and refiners in the district attribute at least 25 per cent of the price cutting in the territory to evasion of the gasoline tax. The report of the Indiana Gasoline Tax Evasion Committee covering October notes an increase of $40,000 in revenue to the state from blended motor fuels alone. Frank Hatfield, president of the Indiana Motor Club, favors a campaign to inform the motoring public that it is paying gasoline taxes at a rate of $2,000,000 a day, or about twice the admittedly burdensome taxes levied on all the railroads of the country.

There has been very little buying on the spot market although a good volume of business is reported moving on contracts. Certain refiners have checked their contract volume to jobbers and distributors in Indiana, where individual tax reports are available, and have found that the quantity taken out on contract represents approximately 100 per cent of the business of these jobbers and distributors. Several of the smaller distributors in Chicago district have discontinued buying gasoline and are now doing business, at least temporarily, on a brokerage basis. The tightening of credits, as well as the slowness of jobbers in the markets is largely responsible for this change. Up to a few days ago the brokers were offering up to 40 cars of U. S. Motor gasoline at 4 cents to the trade. Monday's quotations did not include any representative prices under the ruling markets of 4½ to 4¾ cents. The situation has been such in Chicago district that it has been practically impossible to gauge the gasoline tank car markets with any degree of accuracy. Jobbers are not at all interested in the open markets at any price, as indicated by the fact that the brokers said they were able to move only two cars of U. S. Motor at the 4-cent price, although they had offered the material freely. As pointed out last week in these columns, the jobbers may consider these price concessions as the forerunners of larger cuts. If that was the case, it appears that disappointment is in store for the jobbers. The change in the attitude of the brokers over the week-end has been a remarkable thing. Where last week they were prepared to see the bottom fall out of the market, this week they express the belief that the bottom has been reached and betterment may be looked for. Whether or not the new weakness in the blending naphtha and natural gasoline tank car markets has had some influence in effecting this change of heart, is still another question. The 16-18 pound material is offered freely at 4 cents to the trade, and the 26-70 material has moved down to 3⅛ cents, or half a cent, to the trade. One naphtha source was offering 54-56 water white, 140-437 material for immediate shipment at 4 cents. The high octane naphthas, as with gasolines, are still commanding good prices. However, two refiners were offering as follows: 60-62, 400 endpoint gasoline of 65 octane, 4⅝ cents, and 60-62 400 endpoint of 72 octane, 5⅛ cents. Naphtha prices were: 50-52 420 endpoint of 63 octane, quarter of a cent over the U. S. Motor low; 52-54 400 endpoint of 65 octane, low of the middle octane bracket. Monday's tank car gasoline prices are unchanged from last week with the exception of an eighth of a cent advance made on the top of the 60-62 400 endpoint gasoline range.

Special Naphtha Tank Car Markets

As has already been stated, the special markets appear firm and expected to advance sharply about the middle of this month. Stoddard solvent is a quarter of a cent higher this week with the new range being 6¼ to 6½ cents.

Kerosene Tank Car Markets

The kerosene tank car markets continue firm and demand appears to be picking up slightly for farm use, and in a larger degree for blending purposes. Kerosene is enjoying a versatile period and is going into gasoline for volume and into gas oils and fuel oils in the interests of flashpoint and viscosity. Prices Monday showed an advance of an eighth of a cent, with 3⅝ to 3¾ cents quoted on the 41-43 water white material, and 3¾ to 3⅞ cents quoted on the 42-44 water white kerosene.

Fuel Oils and Distillates

Empire Oil & Refining Co., effective today, is advancing the price of its 16-20 zero fuel oil 5 cents to 45 cents, and the price of its 18-22 zero fuel oil a similar amount to 47½ cents, in the Chicago switching district. Globe Oil & Refining Co. met this advance in the switching district on the same date. Advances outside the Chicago switching district ranged from 5 cents down to 2½ cents a barrel as follows: 18-22 zero fuel oil, up 2½ cents to a range of 55 to 60 cents a barrel; below 18 zero fuel, up 5 cents to a range of 47½ to 55 cents. The 32-36 industrial gas oil has been subject to heavy call and has moved up accordingly to a range of 2⅛ to 2¼ cents. Other fuels were unchanged in price and steady. Heating oil distributors appear to be strongly opposed to further increases in the tank car markets, and they report that they do not plan to advance the tank wagon postings for at least 60 days. They say that jobbers and small distributors are able to stay out of the spot markets until some time in January.

East Coast Expecting Early Advance in Gasoline Tank Car Market; Export More Active

By A. E. MOCKLER
New York Bureau, The Oil and Gas Journal

NEW YORK, Nov. 7.—A strong undertone featured the East Coast refined products market during the past week, with gasoline in particular in firm position and the trade looking for an early price increase. Reports in some divisions of the market indicate the likelihood of a 1-cent advance, but in other branches of the trade it is stated the advance will more likely amount to but one-half cent on tank car sales. Reaffirmation by the Standard Oil Co. of New Jersey during the week of its unwillingness to meet the recent crude advances in the Southwest was received with mixed emotion in the trade. Some interests were of the opinion that this stand by the Jersey company would react against early improvement in East Coast gasoline prices, while other authorities believed that the New Jersey company would follow an upward movement in gasoline here and that the better yield of its products sales might modify its position with regard to action by its subsidiaries toward meeting the recent advances in crude oil posted prices.

Another development of general interest during the week was the improved outlook for export sales, as indicated by the reported closing of three gasoline cargoes for shipment abroad during the current month and December. A major company with export facilities both in the East and at the Gulf was credited with booking the cargoes, with the probability that shipment would be made from East Coast refineries. Advancing products prices at the Rumanian export terminal at Constanza had tended to create a much more optimistic sentiment with regard to possible increasing foreign demand for gasoline and other American refined products.

The gasoline competitive situation was intensified during the week by the introduction of quantity discounts in East Coast territory by the Atlantic Refining Co., competing companies meeting this plan in their own sales. The quantity discounts range from 1 cent to 3½ cents per gallon on retail and tank wagon sales.

Refinery Gasoline

There was a good movement of U. S. Motor gasoline reported during the week, and the market held steady at 6¼ to 6½ cents per gallon at principal East Coast marketing centers for tank car shipments, f.o.b. terminals. On U. S. Motor gasoline of 65 octane and better, the general market was 7 cents per gallon, with leading refiners allowing contract buyers a discount of one-half cent per gallon.

Refiners have been momentarily expecting a mark-up in tank car prices, but apparently the market lacks leadership for the upward move. Sinclair Refining took the initiative in the recent advance, and apparently the market is waiting for one of the other refiners to point the way to higher prices now. Standard Oil Co. of New Jersey is normally the price-maker for East Coast territory, but in view of that company's expressed views with relation to present crude prices, it is not considered likely that the Jersey company will assume leadership for a higher price basis for gasoline at this time, although conceivably that company would follow any general advance.

Refineries in this area continue to limit operations, and further progress is being made in the general campaign to cut down surplus holdings and balance current production with demand.

Tank Wagon Kerosene

The only price change reported during the week was a half cent cut at Utica, N. Y., by Standard of New York on November 2, bringing the tank wagon quotations at that point down to 12 cents. Markets were steady to firm in the remainder of the territory, with the trade generally looking for an early increase.

Weather conditions were generally favorable throughout the territory during the week, and gallonage was running into satisfactory totals. Marketers are experiencing some difficulty in their efforts to stimulate premium motor fuel sales, although colder weather has been instrumental in boosting consumer demand for the higher grade product.

Eastern marketers were surprised by announcement during the week by Atlantic Refining Co. of the adoption of quantity discount schedules for tank wagon and retail sales. The discounts range from 1 to 3½ cents per gallon, according to quantity. Other marketers have followed the Atlantic in adoption of quantity discount plans.

Kerosene

Refinery kerosene markets continued active throughout the past week, with an increase in tank car movement reported in some quarters as demand broadened further. Stocks of kerosene at refineries are by no means large, and current production in some instances is reported to be insufficient to take care of incoming orders. Buyers who have sounded out the Gulf and California markets for cargo lots have encountered firm price views, but it is probable that additional stocks will be brought into East Coast territory from these points to supplement production of Atlantic Coast refineries in the event that demand holds at its present rate. Leading refiners are posting the market for 41-43 water white in tank car lots at 5½ cents per gallon and the market is characterized as firm at that level.

Activity in the refinery market is paralleled in the tank wagon kerosene trade, and current gallonage is reported to be running ahead of that for the comparable period of 1931 in many sections of the territory. No changes in tank wagon quotations developed during the period.

Furnace Oil

With the heating season under way in full swing, continued active demand for domestic heating oils featured eastern markets during the week. The tank car market is steady at 5 cents per gallon for 36-40 oil, 4 cents for 32-36 and 3½ cents for 21 gravity industrial fuel oil, all f.o.b. terminals.

Tank wagon prices remain unchanged at 7 cents per gallon for 36-40 oil, 6½ cents for 32-36 and 6½ cents for 28-32 oil. Most of this business is under contract, and marketers in most instances have carried over last year's prices into the current season. Tank wagon deliveries generally specify a minimum "drop" of 150 gallons, with smaller quantities carrying a premium of one-half cent per gallon.

Fuel Oil

Recent strength in the Bunker "C" oil market in East Coast territory has been offset somewhat by reports of shading in the Philadelphia area, where sales are reported to have been made at 70 cents per barrel, 5 cents under posted levels. The Philadelphia market during the past few years has been the hotbed of considerable price competition in fuel oil, and thus far weakness originating at that point has not spread to other Atlantic ports. Sellers here and at other principal ports continue to quote 75 cents per barrel, terminals, or 80 cents f.a.s.

Fuel oil interests, refiners and consumers alike, are watching the East Texas situation carefully. A complete breakdown of proration, it is generally felt, would be immediately reflected in the fuel oil market, while continuance of the status quo, with Standard Oil companies of New Jersey and Indiana following in the recent price advances, would make for a stronger bunker oil situation.

Diesel Oil

Leading refiners have generally finished their contracting campaigns for 1933, and the bulk of the marine business for the coming year is now on the books, under the usual "open price" form of contract, with a guaranteed maximum price for the year. The spot market holds steady and unchanged at $1.65 per barrel, at terminals, or $1.71½ per barrel f.a.s. harbor.

Marine consumption of Diesel oils has held up unexpectedly well thus far in the year, and early expectations of a sharp drop in aggregate gallonage for 1932 are not being fulfilled. In as much as each of the major refiners has some particularly outstanding feature about his own make of Diesel oil, and large consumers are particularly "fussy" about their specifications, the Diesel oil market does not come in for the same type of price competition common with other types of refined products, and this division of the trade in recent years has shown more stability than any other branch of the market.

Gas Oil

Routine activity was again reported from this division of the market, and the posted price of 4 cents per gallon for 28 plus recycled oil, f.o.b. terminals in tank car lots, was unchanged.

Contract withdrawals continue to account for the bulk of the business, with large public utility companies taking stocks in large volume. A number of the eastern manufactured gas companies have met with considerable success in building up a larger load of gas business for domestic heating, and this is naturally reflected in their manufacturing operations.

Surplus stocks of gas oil are moving into consumption as domestic heating oils, and the market undertone is showing a fair degree of firmness.

Paraffin Wax

Domestic consumers have shown no inclination to step up their buying operations, and while considerable inquiry is coming into the market, actual new business continues at a low ebb. Buyers in most instances are content to continue on a hand-to-mouth basis, buying no more than 30 days ahead, and contesting each price fraction vigorously when placing orders.

There were no further price changes reported in fully refined grades. On the lower melting points, the price undertone is still rather soft, but stocks of the higher melting points appear to be well controlled, and there is little inclination being shown by refiners to meet the low price views of buyers on spot material.

Export interest picked up a little during the week, with much of the inquiry for crude scale or semirefined grades.

Petrolatum

There were no developments of outstanding interest in this branch of the market during the week. Pharmaceutical and cosmetic manufacturers were taking stocks in fair volume, and prices were steady and unchanged on all grades.

Lubs

The sharp price declines registered on cylinder oils during the preceding week failed to stimulate demand to any material extent, and spot trading was again confined to small lots for prompt shipment during the week under review. No further price changes developed. Export buyers were still bearish in their price views, but refiners were showing more inclination to hold for asking prices, and were endeavoring to stabilize the market at current quoted levels. Intercompany movement continues to account for considerable of the export business locally, the tanker "Winnebago," of Anglo-American Oil Co. (Standard Oil of New Jersey subsidiary) having recently cleared with some 1,700,000 gallons of cylinder oils included in her cargo.

Pale and red engine oils experienced a little more activity, and the market was showing a fairly steady tone. While consuming manufacturers in most instances are endeavoring to hold down stocks until after the year-end inventory, considerable replacement buying has been necessary, and this has made for more activity at the refineries.

One reason for the hand-to-mouth type of industrial lub buying appears to be the expectation that the present excise tax of 4 cents per gallon may be modified or removed at the coming session of Congress, and while there is any possibility of such action, buyers are naturally averse to accumulating inventories of oil on which the tax must be paid.

Gulf Export Market

In sympathy with strengthening domestic markets and higher prices for Rumanian gasoline at Constanza, the Gulf market is stronger at 4⅝ cents per gallon for U. S. Motor, 60-62, 400 endpoint, and 61-63, 390 endpoint, and 4¾ cents per gallon for 64-66, 375 endpoint. No cargoes were reported closed at the Gulf, but it was reported that three cargoes for the United Kingdom-Continent, previously inquired for at the Gulf, had been taken by a major company, and would be shipped from an East Coast refinery terminal.

Petroleum Exports

Export movement of principal refined products showed an upturn for the week ended October 29, with more inquiry in the market for supplies for nearby shipment, indicating a more active export market over the balance of the year.

The following table shows exports of principal refined petroleum products reported from the local port during the past three weeks (all figures in gallons unless otherwise noted):

	Week ended—		
	Oct., 29	Oct., 22	Oct., 15
Gasoline	170,000	140,000	165,000
Naphtha	.....	.....	810,000
Kerosene	250,000	5,000	6,000
Fuel and gas oil	2,000	123,000	14,000
Lubricating oil	2,181,000	4,950,000	570,000
Petroleum, refined	300,000	110,000	595,000
	Pounds		
Petrolatum	.....	75,000	.....
Paraffin wax	1,600,000	460,000	1,190,000
Refined	.....	390,000	388,000
Scale	357,000	365,000	95,000
Lub. grease	595,000	310,000	675,000

REFINERY AND CRUDE PRICES

Quotations on refined products are for interstate or export movement except as otherwise noted

EXCLUSIVE OF TAXES

The following quotations are exclusive of the Federal excise taxes of 1 cent a gallon on gasoline and 4 cents on lubricating oils, which became effective June 21, 1932.

Gasolines

	Nov. 8		Nov. 1	
OKLAHOMA (Group 3)—				
*U. S. Motor	.04¼	.04¾	.04⅜	.04¾
60-62 400	.04½	.04¾	.04⅝	.04¾
64-66 390	.04¾		.04¾	
64-66 375	.04¾	.05	.04¾	.05
68-70 350	.04⅞	.05¼	.05	.05¼
NORTH TEXAS—				
*U. S. Motor	.04⅛	.04⅜	.04¼	.04½
60-62 400	.04½	.04⅝	.04½	.04⅝
64-66 390	.04⅝	.04¾	.04⅝	.04¾
64-66 375	.04⅝	.04¾	.04¾	
64-66 360	.04¾	.05	.04⅞	.05
†NORTH LOUISIANA—				
*U. S. Motor	.05		.05	
60-62 400	.05¼		.05¼	
†ARKANSAS—				
*U. S. Motor	.05		.05	
CHICAGO (Based on Oklahoma Group 3)—				
*U. S. Motor	.04½	.04¾	.04½	.04¾
60-62 400	.04⅝	.04¾	.04⅝	.04¾
64-66 375	.04⅞	.05¼	.04⅞	.05⅛
Avintion fighting grade	.05½	.05¾	.05½	.05¾
68-70 360	.05⅛	.05⅜	.05⅛	.05⅜

Octane Ratings—Above quotations cover price ranges on gasoline in which no octane rating is given. On November 8, in the case of the U. S. Motor and 60-62 400 endpoint grades, where an octane rating of 57-65, inclusive, is guaranteed, prices are three-eighths cent per gallon higher than quotations shown in above tables; where an octane rating of better than 65 is guaranteed, the prices are five-eighths cent higher. In the case of the remaining grades, gasolines of 65 octane rating or higher are quoted one-half cent higher than the quotation shown in above tables.

Unless otherwise provided by agreement of buyers and sellers, the Series 30 testing equipment of the Ethyl Gasoline Corp. is recognized as standard in determining octane ratings.

*Present distillation specifications on U. S. Motor gasoline are: 10 per cent evaporated, 167° F. maximum; 50 per cent, 284° F. maximum; 90 per cent, 392° F. maximum; residue not exceeding 2 per cent; maximum vapor pressure, 12 pounds. Additional specification on U. S. Motor gasoline available from bulletins of Bureau of Mines, Washington, D. C.

†For Arkansas, Louisiana and Mississippi delivery.

PENNSYLVANIA (inland refineries)—				
U. S. Motor	.05¾	.06	.05¾	.06
60-62 400	.06	.06¼	.06	.06¼
64-66 375	.06¼		.06¼	
68-70 350	.06½		.06½	

Octane Ratings—In the case of U. S. Motor and 60-62 400 endpoint grades, same price differentials based on octane ratings as shown in above tables for Oklahoma and other Mid-Continent areas:

CALIFORNIA—(domestic movement only)—				
54-58 U. S. Motor	.06	.06¾	.06	.06¾
58-60 400	.07	.07½	.07	.07½
EAST COAST—				
U. S. Motor, below 65 octane:				
New York (Bayonne)	.06½	.06½	.06¼	
Boston	.06½	.06½	.06¼	.06½
Baltimore, Md.	.06¼		.06¼	
Charleston, S. C.	.06¼		.06¼	
U. S. Motor, 65 octane and above:				
New York (Bayonne)	*.06½	.07	*.06½	.07
Boston	.06½	.07	.07	
Baltimore, Md.	*.06½	.07	*.06½	.07
Charleston, S. C.	*.06½	.07	*.06½	.07
GULF COAST (domestic)—				
U. S. Motor, 65 octane and above	.05½	.05¾	.05½	.05¾
U. S. Motor, below 65 octane number	.04¾	.05	.04¾	.05

*Contract price.

Naphthas

	Nov. 8		Nov. 1	
OKLAHOMA (Group 3)—				
50-52 450 (blending)	.04¼	.04½	.04¼	.04½
PENNSYLVANIA (inland refineries)—				
50-54 430-450 (blending)	.06	.06¼	.05¾	.06
ARKANSAS—				
48-50 450 (blending)	.05		.05	
CHICAGO (Based on Oklahoma Group 3)—				
50-52 450 (blending)	.04¼	.04½	.04¼	.04½
Cleaners' naphtha, 56-58 gr., 200 i.b.p.-320 e.p.	.06¼	.06½	.06¼	.06½
Lacquer diluent, 180 i.b.p.-250 e.p.	.07¾	.08	.07¾	.08
Lacquer diluent, 140 i.b.p.-200 e.p.	.08¼	.08½	.08¼	.08½
Rubber solvent, 68-70 gr., 100 i.b.p.-300 e.p.	.06¼	.06½	.06¼	.06½
Stoddard solvent, 300 i.b.p.-410 e.p. over 100° flash	.06	.06¼	.06	.06¼
Pet. thinner, 290, 300 i.b.p.-415 e.p., over 83° flash	.05¼	.05½	.05¼	.05½
V.M.&P. naphtha, 56-58 gr., 190-200 i.b.p.-330 e.p.	.06¼	.06½	.06¼	.06½
Petroleum spirits	.04	.05¼	.04	.05¼

Natural Gasolines

	Nov. 8		Nov. 1	
OKLAHOMA (Group 3)—				
Grade 18-55	.03¾		.04	
Grade 26-70	.03		.03¼	
Grade 30-70	.02⅞		.03⅛	
*Low pressure grades:				
15 lb. v.p. (max.)	.04¼		.04⅜	.04½
11 lb. v.p. (max.)	.04½	.04⅝	.04¾	
NORTH TEXAS—				
Grade 18-55	.03⅝		.04	
Grade 26-70	.02⅞	.03	.03¼	
Grade 30-70	.02¾		.03⅛	
*Low vapor grades:				
15 lb. v.p. (max.)	.04¼		.04⅜	.04½
11 lb. v.p. (max.)	.04½		.04¾	
NORTH LOUISIANA—				
Grade 26-70	.03¼		.03½	
CALIFORNIA—				
75-78 375	.04¾	.05½	.04¾	.05½

Note—Grades 18-55, 26-70 and 30-70 are three of 24 grades adopted by the Natural Gasoline Association of America effective January 1. The grades are based on pounds vapor pressure and amount evaporated at 140° F. While not exactly the same specifications apply, Grade 18-55 corresponds to the former Grade A, Grade 26-70 to former Grade AA and Grade 30-70 to former Grade BB.

*All low vapor pressure grades have minimum recovery of 96 (natural gasoline method.)

Kerosenes

(All kerosenes water white)

	Nov. 8		Nov. 1	
OKLAHOMA (Group 3)—				
41-43	.03½	.03¾	.03⅝	.03¾
42-44	.03¾	.03⅞	.03¾	.03⅞
NORTH TEXAS—				
40-41	.03⅜		.03⅜	.03½
41-43	.03½		.03½	.03⅝
†NORTH LOUISIANA—				
41-43	.04		.04	
42-44	.04¼		.04¼	
†ARKANSAS—				
41-43	.04		.04	
PENNSYLVANIA (inland refineries)—				
45	.04⅝	.04¾	.04⅝	.04¾
46	.04¾	.04⅞	.04¾	.04⅞
47	.04¾	.05	.04¾	.05
CHICAGO (Based on Group 3)—				
41-43	.03½	.03¾	.03½	.03¾
42-44	.03⅝	.03⅞	.03⅝	.03⅞
*CALIFORNIA—				
38-40 high burning test	.04	.04¾	.04	.04¾
NEW YORK (Bayonne, N. J.)—				
41-43	.05½		.05½	
GULF COAST (domestic)—				
41-43 water white	.04¾	.05	.04¾	.05

*For Pacific Coast consumption.
†For Arkansas, Louisiana and Mississippi delivery.

Tractor Fuels*

	Nov. 8		Nov. 1	
OKLAHOMA (Group 3)—				
39-40 prime white	.03⅝		.03⅝	
38-40 light straw	.03¼		.03¼	
NORTH TEXAS—				
38-40 light straw	.03¼		.03¼	
CHICAGO (Based on Group 3)—				
38-40 light straw	.03⅜	.03½	.03⅜	.03½
PENNSYLVANIA (inland refineries)—				
41-43 prime white	.04¼		.04¼	

*There are no standard specifications for tractor fuels. Grades commonly sold have flash under 175° F. (open cup) and under 575° F. endpoint and less than .2 per cent sulphur. Tractor fuels are available from all Mid-Continent refining groups at prices in line with the Oklahoma market taking into consideration differentials in freight rates.

Furnace Oils*

	Nov. 8		Nov. 1	
OKLAHOMA (Group 3)—				
32-36 straw	.03¼	.03¼	.02⅞	.03
36-38 straw	.03¼	.03¼	.03	.03⅛
38-40 straw	.03¼		.03⅛	.03¼
39-41 prime	.03¼	.03⅜	.03¼	.03⅜
NORTH TEXAS—				
38-40 straw	.03⅛	.03¼	.03⅛	.03¼
†NORTH LOUISIANA—				
36-40	.04		.04	
†ARKANSAS—				
32-36	.03⅜	.03½	.03⅛	.03¼
CHICAGO (Based on Group 3)—				
32-36 straw	.03⅛	.03¼	.03⅛	.03¼
38-40 straw	.03⅜	.03½	.03⅜	.03½
PENNSYLVANIA (inland refineries)—				
40-41 prime white	.03¾	.04	.03¾	.04
NEW YORK (Bayonne, N. J.)—				
32-36	.04		.04	
36-40	.05		.05	
21 (industrial)	.03½		.03½	

*Above prices are for furnace oils of zero cold test under 193° F. flash and good odor.
†For Arkansas, Louisiana and Mississippi delivery.

Gas Oil, Diesel Oil and Fuel Oil

Gas oil (G.O.) quoted per gallon basis; Diesel oil and fuel oil per barrel.

	Nov. 8		Nov. 1	
OKLAHOMA (Group 3)—				
32-36 (G.O.) cracking stock	.02	.02¼	.02	.02¼
U.G.I. (G.O.)	.02	.02⅛	.02	.02⅛
32-36 zero to 15 (G.O.) high flash	.02⅝	.02¾	.02⅝	.02¾
28-30, zero to 10	1.00		1.00	
26-30, zero to 10	.85	.90	.85	.90
24-26	.60	.65	.60	.65
20-22	.55	.60	.55	.60
16-20	.50	.55	.50	.55
Below 16	.45	.47½	.45	.47½
NORTH TEXAS—				
32-36 (G.O.) industrial	.01⅞	.02	.01⅞	.02
22-26	.45	.50	.45	.50
Below 20	.40	.45	.40	.45
NORTH LOUISIANA—				
32-36 (G.O.) zero	.03¼		.03	
14-16	.35	.40	.35	.40
†ARKANSAS—				
30-32 (G.O.) zero high flash	.03¼		.03	
14-16	.35	.40	.35	.40
CHICAGO (Based on Group 3)—				
32-36 (G.O.) industrial	.02⅛	.02¼	.02	.02⅛
28-30 (zero)	1.00	1.10	1.00	1.10
22-26	.70	.75	.70	.75
18-22	.55	.60	.52½	.57½
Below 18	.47½	.55	.42½	.47½
PENNSYLVANIA (inland refineries)—				
36-40	.03¼	.03½	.03¼	.03½

Note—Fuel oils of more than 40 cold test generally 5 to 10 cents per barrel less in all areas than shown in above tables.

†For Arkansas, Louisiana and Mississippi delivery.

CALIFORNIA—				
30-34 (G.O.) per bbl.	.75	.85	.75	.85
27 plus Diesel	.75	.85	.75	.85
15-19 bunker (at tidewater)	.55	.65	.55	.65
15-19 (cargo lots)	.50	.60	.50	.60
15-19 (tank car)	.40	.60	.40	.60
GULF COAST—				
28-30 (G.O.)	.03½	.03¾	.03½	.03¾
28-30 Diesel	1.50	1.65	1.50	1.65
Bunker C (bulk cargoes)	.45	.50	.45	.50
Bunker C (bunkers)	.60		.60	
NEW YORK (Bayonne, N. J.)—				
28 plus (G.O.)	.04		.04	
*28-30 Diesel	1.65		1.65	
26-30 Diesel (tank cars)	.04		.04	
†Bunker C	.75		.75	

*Lighterage 6½ cents per barrel.
†Lighterage 5 cents per barrel.

Petroleum Coke*

Prices per ton f.o.b. refineries in Chicago area.

Breeze (screenings)	5.00	5.50	5.00	5.50
Still runs	5.50	6.50	5.50	6.50
Lump and egg	7.50	8.00	7.50	8.00

*Refineries will absorb freight to 80 cents a ton.

Neutral Oils

(Viscosity at 100° F. and color)

	Nov. 8		Nov. 1	
OKLAHOMA (Group 3)—				
Zero to 10 Cold Test:				
150-3	.06¼	.06½	.06¼	.06½
180-3	.07½	.07¾	.07½	.07¾
180-4	.07	.07¼	.07	.07¼
200-3	.08¼	.08½	.08¼	.08½
200-4	.08	.08¼	.08	.08¼
240-3	.09¾	.10	.09¾	.10
240-4	.09¼	.09½	.09¼	.09½
280-3	.11¼	.11½	.11¼	.11½
280-4	.10¼	.10½	.10¼	.10½
300-3.5	.11¾	.12	.11¾	.12

350-3.5	.12¼	.12½	.12¼	.12½
400-4	.12¾	.13	.12¾	.13
500-4.5	.13¼	.13½	.13¼	.13½
100-2 paraffin oil	.04¼	.04½	.04¼	.04½
15-30 Cold Test:				
200-3	.07¾	.08	.07¾	.08
200-4	.07½	.07¾	.07½	.07¾
240-3	.09¼	.09½	.09¼	.09½
240-4	.08¾	.09	.08¾	.09
280-3	.10¾	.11	.10¾	.11
280-4	.09¾	.10	.09¾	.10
PENNSYLVANIA—				
150 vis., No. 3, 400-405:				
Zero pour test	.12	.13½	.13½	.14
10 pour test	.12	.13	.12½	.13
15 pour test	.10½	.11	.10½	.11
25 pour test	.10		.10	
30 pour test	.09¾		.09¾	
180 vis., No. 3, 25 pour test	.12½	.13	.12¾	.13
200 vis., No. 3:				
Zero pour test	.19	.20	.19	.20
10 pour test	.18	.19	.18	.19
15 pour test	.17		.17	
25 pour test	.14½	.15	.15	.15½
30 pour test	.14½		.15	
GULF COAST—				
Pale Oils:				
100-2-2½	.04¾	.05	.04¾	.05
200-3	.06	.06¼	.06	.06¼
300-3	.07		.07	
500-3½	.08¾	.09	.08¾	.09
750-3½	.09¾	.10	.09¾	.10
1,200-3½	.11¾	.12	.11¾	.12
2,000-4	.12½	.13	.12½	.13
Red Oils:				
200-5-6	.05		.05	
300-5-6	.05¾	.06	.05¾	.06
500-5-6	.07¾	.08	.07½	.08
1,200-5-6	.10¾	.11	.10¾	.11
2,000-6 plus	.12½		.12½	.13
CALIFORNIA—				
Pale Oils:				
100-2½-3	.08	.08½	.08	.08½
200-2½-3	.08¾	.09½	.08¾	.09½
300-3-3½	.10	.10½	.10	.10½
350-3-4	.10½	.10¾	.10½	.10¾
400-3-4	.10¾	.11	.10¾	.11
450-3-4	.11¼	.12	.11¼	.12
550-3-4	.12	.12½	.12	.12½
Red Oils:				
200-4½-5	.08½	.09	.08½	.09
300-5-6	.09¼	.10	.09¼	.10
350-5-6	.10	.10¾	.10	.10¾
400-5-6	.10¾	.11¼	.10¾	.11¼
450-5-6	.11¼	.11½	.11¼	.11½
500-5-6	.11½	.12	.11½	.12
600-5-6½	.12	.12¼	.12	.12¼
700-6½ plus	.12¼	.12½	.12¼	.12½
750-6½ plus	.12¼	.12½	.12¼	.12½
900-6½ plus	.13	.14½	.13	.14½

Bright and Steam Refined Stocks

OKLAHOMA (Group 3)—	Nov. 8		Nov. 1	
630 light green	.07¾	.08	.07¾	.08
600 light green S.R.	.05	.06	.05	.06
600 dark green S.R.	.04	.04½	.04	.04½
Bright Stocks:				
190-200 D	.17½		.18	
150-160 D, 0-10	.15½		.17	
150-160 D, 10-25	.15		.16½	
150-160 D, 25-40	.14½		.16	
150-160 E	.14½		.16	
PENNSYLVANIA—				
600 S.R.	.10½	.11¼	.11	.11¼
650 S.R.	.13	.13½	.13¼	.13¾
600 Pennsylvania flash	.14	.14½	.14¼	.14½
630 D filtered	.19¼	.19½	.19¼	.19½
600 E filtered	.14½	.15	.14½	.15
Pennsylvania Grade bright stock:				
Bright Stock, No. 8 color, 145-50 vis.				
210-540-550 flash:				
10 pour test	.24	.25	.24	.25
15 pour test	.21½	.22	.21½	.22
25 pour test	.20	.21	.20	.21

Wax and Petrolatum

(Prices per pound)

OKLAHOMA (Group 3)—	Nov. 8		Nov. 1	
124-126 white crude scale	.01¾	.01⅞	.01¾	.01⅞
PENNSYLVANIA—				
122-124	.02¼		.01⅞	.02
124-126	.02⅛	.02¼	.02	
NEW YORK (Bayonne, N. J.)—				
Refined Wax:				
120-122	.02⅝		.03⅜	
125-127	.02¾		.02¾	
130-132	.03¼		.03¼	
133-135	.03⅞		.03⅞	
135-137	.04¼		.04¼	
Petrolatum in barrels in carload lots:				
Dark green	.01¾		.01¾	
Amber	.02⅛		.02⅛	
Etxra amber	.02½		.02½	
Cream	.04⅝		.04⅝	
Lily white	.05½		.05½	
Snow white	.06½		.06½	

Export Prices

GASOLINE

GULF COAST—	Nov. 8		Nov. 1	
U. S. Motor	.04⅝		.04⅜	
60-62 400	.04⅝		.04⅜	
61-63 390	.04⅝		.04½	
64-66 375	.04⅝		.04⅝	
LOS ANGELES, CALIF.—				
U. S. Motor, 53-55 437 e.p..	.03¾	.04¼	.03¾	.04¼
U. S. Motor, 65 octane num.	.05		.05	
U. S. Motor, 67 octane num.	.05¼		.05¼	
U. S. Mtoor, 69 octane num.	.05½		.05½	
58-60 400 endpoint gasoline.	.04¼	.05	.04¼	.05

KEROSENE

GULF COAST—				
41-43 prime white	.04½		.04⅜	.04½
41 water white	.04⅝		.04½	
LOS ANGELES, CALIF.—				
41-43 water white	.03¾	.04¼	.03¾	.04¼

LUBRICANTS

NEW YORK, (f.a.s. in bbls.)—				
600 filtered	.23		.23	
600 Warren E	.20½		.20½	
600 S.R. unfiltered	.18½	.19	.18½	.19
650 S.R. unfiltered	.20	.21	.20	.21
600 flash S.R.	.21	.22	.21	.22
630 flash S.R.	.25½	.26	.25½	.26
Bright stock, No. 8 color	.26		.26	
Bright stock, No. 6½ color, dil.	.25½		.25½	

NEUTRALS

NEW YORK—Pale Engine Oil, Bulk (vis. at 100):				
230-3¾	.10	.10¼	.10	.10¼
180-3¼	.09½	.09¾	.09½	.09¾
10 to 21¼	.05	.05½	.05	.05½
Red Engine Oil, Bulk (vis. at 100):				
300-6½	.09½	.09¾	.09½	.09¾
250-6	.09	.09¼	.09	.09¼
200-6	.08½		.08½	

Crude Oil Prices

Oklahoma, Kansas, North and East Central Texas

East Texas (Oct. 15, 1932)* $1.10
East Texas (Oct. 1, 1932)† ..... .98
Corsicana heavy (Oct. 15, 1932)‡ ..... .74
Other fields ..... See gravity table

*Posted by Sun Oil Co., Sinclair Prairie Oil Marketing Co., Magnolia Petroleum Co., Panola Pipe Line Co., The Texas Company, Gulf Pipe Line Co., Toronto Pipe Line Co.

†Posted by Humble Oil & Refining Co., October 1, 1932; posted by Tidal Refining Co. and Atlas Pipe Line Co., April 11, 1932.

‡Magnolia Petroleum Co.

West Texas

Iatan and Westbrook..Same as North Texas
Crane, Upton, Crockett, Howard, Glasscock, Mitchell, Ector, Winkler and Pecos counties ..... See note below
Lea County, New Mexico ..... (See Rocky Mountain States)
Toborg, Pecos County* ..... $ .65

Note—Effective October 15, 1932, The Texas Company, Magnolia Petroleum Co., Shell Petroleum Corp. and Gulf Pipe Line Co., 75 cents; effective April 11, 1932, Humble Oil & Refining Co. and Stanolind Oil & Gas Co., 65 cents.

*Shell Petroleum Corp., effective October 15, 1932.

Texas Panhandle

Gray County, Wheeler County and Carson-Hutchinson Counties.... See gravity table

Gulf Coast

Grade A and Grade B specifications discontinued by leading buyers ..... See gravity table
Jennings, La. (Apr. 11, 1932)* ..... $ .75
Lockport, La...See Gulf Coast gravity table
Refugio, light ..... See gravity table
Refugio, heavy (Apr. 11, 1932)‡ ..... .80
Markham (Oct. 15, 1932)§ ..... See Gulf Coast gravity schedule
High Island (Apr. 11, 1932)¶ ..... See Gulf Coast gravity schedule

*Gulf Refining Co. ‡Humble Oil & Refining Co. §The Texas Company. ¶Yount Lee Pipe Line Co.

South Central and Southwest Texas

Darst Creek ..... See note below
Luling (Oct. 15, 1932)* ..... $ .74
Mirando (Apr. 1, 1932)* ..... .90
Pettus (Apr. 11, 1932)† 1.00
Salt Flat ..... See note below
Thrall‡ .....
Lytton Springs (Lockhart) (Oct. 15, 1932)* 1.00
Dobrowolski§ .....
Same as Mid-Continent gravity scale up to and including 38-38.9°
Somerset¶ .....
Same as Mid-Continent gravity scale up to and including 38-38.9°

Note—Darst Creek, effective October 15 1932, Magnolia Petroleum Co., The Texas Company and Gulf Pipe Line Co., 85 cents, effective April 11, 1932, Humble Oil & Refining Co., 75 cents. Salt Flat, effective October 15, 1932, Magnolia Petroleum Co. and Shell Petroleum Corp., 85 cents; effective April 11, 1932, Humble Oil & Refining Co. 75 cents. Humble Oil & Refining Co. posted 80 cents for Mirando crude oil on April 11, 1932.

*Posted by Magnolia Petroleum Co.

†Humble Oil & Refining Co.

‡Thrall prices same as North Central Texas, less 19½ cents per cwt. freight.

§Pioneer Oil & Refining Co.

¶Greyburg Oil & Refining Co.

North Louisiana and Arkansas

Smackover, Ark. (all grades) ..... See note below
Urania, La. (Oct. 15, 1932) ..... $ .70
East El Dorado, Ark. (Oct. 15, 1932).. .75
Stephens, Ark., below 29° (Apr. 12, 1932) .61
Stephens, Ark., 29° and above (Apr. 12, 1932) ..... .64
Other fields ..... See gravity table

Note—Smackover, all grades, effective October 15, 1932, The Texas Company, Magnolia Petroleum Co., Louisiana Oil & Refining Co., Gulf Refining Co. of Louisiana, 75 cents; effective April 11, 1932, Standard Oil Co. of Louisiana, 60 cents. Urania posted by H. L. Hunt, Inc., and Louisiana Oil & Refining Co. East El Dorado posted by Magnolia Petroleum Co. and Gulf Refining Co. Stephens, Ark., posted by Louisiana Oil & Refining Co. and Atlantic Oil Producing Co

Rocky Mountain States

OHIO OIL CO.-MIDWEST REFINING CO.
Iles, light (Aug. 24, 1931) ..... $ .75
Iles, heavy (Aug. 24, 1931) ..... .53
Fort Collins (Apr. 11, 1932) ..... .86
Florence (Apr. 11, 1932) ..... .80
Wellington (Apr. 11, 1932) ..... .76
Greasewood Dome, Colo. (Apr. 11, 1932) 1.00
Dutton Creek, Wyo. (Apr. 11, 1932) .... .82
Rock Creek, Wyo. (June 1, 1932) ..... .90
Frannie, light (Nov. 3, 1931) ..... .61
Frannie, heavy (Nov. 3, 1931) ..... .51
Salt Creek ..... See Stanolind Mid-Continent price schedule
LaBarge..... Mid-Continent gravity scale
Big Muddy (Apr. 11, 1932) ..... .98
Grass Creek (June 1, 1932) 1.10
Elk Basin (June 1, 1932) 1.10
Lance Creek (Apr. 11, 1932) 1.15
Poison Spider (Mar. 5, 1931) ..... .70
Notches (Mar. 14, 1927) ..... .65
Hudson (June 2, 1931) ..... .65
Lander (Mar. 5, 1931) ..... .40
Rex Lake (Feb. 22, 1930) 1.10
Osage (Apr. 15, 1931) ..... .98
Lost Soldier (Apr. 12, 1932) ..... .80
Hamilton Dome (Nov. 3, 1931) ..... .45
Greybull (Apr. 11, 1932) 1.20
Cat Creek (Apr. 11, 1932) 1.20
Pondera (Nov. 3, 1931) ..... .90
Sunburst, Mont. (Apr. 11, 1932) 1.05
Hogback, N. Mex. (Aug. 24, 1931) ..... .80
Border, Mont. 1.55
Red Coulee, Alberta 1.55
Lea County, N. Mex. ..... See note below
Maljamar (Apr. 11, 1932) ..... .60
Artesia-Jackson (Apr. 11, 1932) ..... .65

Note—Salt Creek, Cat Creek, Dry Creek, Dallas-Derby, Hudson, Greybull, Hogback, and Iles by Midwest Refining Co. and remainder by Ohio Oil Co. Both companies posted Grass Creek, Sight and Elk Basin. Lost Soldier posted by Producers & Refiners Corp. Artesia, Jackson and Maljamar posted

(Continued on Next Page)

Crude Oil Gravity Table

Degrees gravity—	Kansas, Oklahoma, North Texas, East Central and Central Texas	Kansas, Oklahoma, North Texas, East Central Texas and Central Texas	North Louisiana and Arkansas	North Louisiana and Arkansas	Hutchinson, Carson and Moore Counties, Texas	Gray County, Texas	Hutchinson, Carson and Moore Counties, Texas	Gray County, Texas	Gulf Coast Texas and Louisiana	Gulf Coast Texas and Louisiana	Cameron Meadows, Louisiana	Salt Creek and La Barge, Wyoming
	1	2	3	4	5	6	7	8	9	10	11	12
Below 25	....	....	$ 80	$.68	....	....	....	....	$ 90	$ 80	$ 80	....
25-25.9	....	....	.82	.70	....	....	....	....	.91	.81	.81	....
26-26.9	....	....	.84	.72	....	....	....	....	.92	.82	.82	....
27-27.9	....	....	.86	.74	....	....	....	....	.93	.83	.83	....
28-28.9	....	....	.88	.76	....	....	....	....	.94	.84	.84	....
Below 29	$.88	$.76	....	....	....	....	....	....	....	....	....	$.76
29-29.9	.90	.78	.90	.78	$.65	$.77	....	....	.95	.85	.85	.78
30-30.9	.92	.80	.92	.80	.67	.79	....	....	.96	.86	.86	.80
31-31.9	.94	.82	.94	.82	.69	.81	....	....	.97	.87	.87	.82
32-32.9	.96	.84	.96	.84	.71	.83	....	....	.98	.88	.88	.84
33-33.9	.98	.86	.98	.86	.73	.85	....	....	.99	.89	.89	.86
34-34.9	1.00	.88	1.00	.88	.75	.87	$.66	$.76	1.00	.90	.90	.88
35-35.9	1.02	.90	1.02	.90	.77	.89	.68	.78	1.01	.91	.91	.90
36-36.9	1.04	.92	1.04	.92	.79	.91	.70	.80	1.02	.92	.92	.92
37-37.9	1.06	.94	1.06	.94	.81	.93	.72	.82	1.04	.94	.94	.94
38-38.9	1.08	.96	1.08	.96	.83	.95	.74	.84	1.06	.96	.96	.94
39-39.9	1.10	.98	1.10	.98	.85	.97	.76	.86	1.08	.98	.98	.94
40 and over	1.12	1.00	1.12	1.00	.87	.99	.78	.88	1.10	1.00	1.00	.94

Column 1—Effective October 15, in Kansas, Oklahoma, North Texas, East Central Texas and Central Texas by Sinclair Prairie Oil Marketing Co.; in Oklahoma, North Texas, East Central Texas and Central Texas by Magnolia Petroleum Co. (Magnolia's schedule begins below 28 degrees, 79 cents; 28-28.9 degrees, 88 cents, with 2 cents added for each degree upward to 40 and over at $1.12); in Kansas, Oklahoma and North Texas by Continental Oil Co.; in Oklahoma and North and Central Texas by The Texas Company; in Kansas and Oklahoma by Philtex Oil Co., Empire Pipe Line Co., Shell Petroleum Corp., Pure Oil Co., Gypsy Oil Co., National Refining Co.; in Oklahoma by Barnsdall Refineres, Inc., Deep Rock Oil & Refining Co., Producers Oil Co.; in North and Central Texas by the Gulf Pipe Line Co.; in Kansas by the Skelly Oil Co., Vickers Refining Co., White Eagle Oil Corp.

Column 2—Effective April 11, in Kansas, Oklahoma and North Central Texas by the Stanolind Crude Oil Purchasing Co.; in Kansas and Oklahoma by Carter Oil Co.; in East Central, Central and North Texas by the Humble Oil & Refining Co.; in Oklahoma by Mid-Continent Petroleum Corp., Champlin Refining Co., Eason Oil Co., Pepper Gasoline Co.; in Kansas by Derby Oil Co., and Kanotex Refining Co.

Column 3—Effective October 15, by The Texas Company, Louisiana Oil Refining Co. and Magnolia Petroleum Co., as per schedule above and Gulf Refining Co., whose schedule begins at below 29 gravity, 88 cents.

Column 4—Effective April 11, Standard Oil Co. of Louisiana and Stanolind Oil & Gas Co.

Columns 5 and 6—Effective October 15, Phil Tex Oil Co., as per above schedules, The Texas Company and Magnolia Petroleum Co. Texas and Magnolia schedules begin at below 35 gravity at 87 cents in Gray County and below 35 gravity at 75 cents in Hutchinson and Carson Counties.

Columns 7 and 8—Effective April 11, Humble Oil & Refining Co.

Column 9—Effective October 15, Sun Oil Co., Sinclair Prairie Oil Co., The Texas Company, Gulf Pipe Line Co., Pure Oil Co., Magnolia Petroleum Co. (in Lockport and Iowa Pools).

Column 10—Effective April 11 by Humble Oil & Refining Co. in Goose Creek, Hull, Liberty, Orange, Pierce Junction, Mykawa, Moss Bluff, Raccoon Bend, Barbers Hill, Sour Lake, Spindletop, Sugarland, West Columbia, Humble, Rabbs Ridge and Refugio light oil. Effective July 18, the Humble Oil & Refining Co. posted Conroe crude as follows: 35-35.9 gravity, 90 cents, with 2 cents added for each degree upward to 40 and over, at $1.

Column 11—Effective October 15, Magnolia Petroleum Co.

Column 12—Effective April 11, Midwest Refining Co.

(California Crude Oil Prices on Page 30)

TANK WAGON MARKETS

Quotations for gasoline and kerosene in United States, as furnished by the larger marketing concerns, include taxes

November 8, 1932

TAXES

The gasoline quotations given in the following tables include the 1-cent Federal tax as well as state, county and city taxes. The gasoline quoted is the regular or standard grade. In most marketing areas a third or competitive grade is generally available at 1.5 or more cents per gallon under the service station price for the regular grade. Ethyl Gasolines are sold 3 cents above the service station price for the regular grade.

Standard Oil Co. (Indiana)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Chicago	15.1	15.1	4.0	10.0
Decatur, Ill.	17.6	17.6	4.0	10.1
E. St. Louis	16.9	14.9	4.0	9.3
Joliet	17.6	15.6	4.0	8.6
Peoria	17.6	15.6	4.0	10.1
Quincy	17.4	17.4	4.0	9.9
Davenport, Ia.	17.7	17.0	4.0	10.4
Des Moines	17.7	16.9	4.0	8.0
Mason City, Ia.	17.7	17.7	4.0	10.4
Sioux City	17.3	17.3	4.0	10.0
Duluth, Minn.	18.7	18.7	4.0	11.0
Mankato	18.3	18.3	4.0	8.1
Minneapolis	16.4	15.4	4.0	11.0
LaCrosse, Wis.	19.4	19.4	5.0	11.1
Green Bay, Wis.	18.8	18.8	5.0	10.5
Milwaukee	17.3	17.3	5.0	10.0
Madison	18.5	18.5	5.0	10.2
Detroit, Mich.	12.6	12.5	4.0	9.9
Grand Rapids	17.5	16.5	4.0	10.3
Saginaw	16.6	16.6	4.0	10.8
Evansville, Ind.	18.3	18.3	5.0	†13.9
Indianapolis	18.4	18.4	5.0	†14.1
South Bend	18.7	18.7	5.0	†14.4
Fargo, N. D.	20.1	20.1	4.0	13.0
Huron, S. D.	19.5	19.5	5.0	11.8
Sioux Falls	19.0	19.0	5.0	10.0
K. C., Mo.*	15.1	15.1	4.0	8.7
Springfield*	17.0	17.0	4.0	8.6
St. Louis	13.5	11.0	4.0	9.4
St. Joseph*	15.0	13.0	4.0	7.5
Wichita, Kans.	15.9	14.9	4.0	7.0
Bartlesville, Ok.	15.5	17.0	5.0	8.0

*State tax 2 cents, 1-cent city tax and 1-cent Federal tax.

†Includes 4-cent tax. Buyers of kerosene not used as motor fuel can secure refund of tax.

Effective November 4—New dump discount applicable on all grades of gasoline sold from tank wagon. Any tank wagon customer buying 25 gallons or more at one time will be given 1-cent discount per gallon off tank wagon price at time of delivery. Customers not under contract receive no other discount.

Effective January 1—Discounts on Q.D.A. on 500 gallons or more per month throughout territory; Red Crown Ethyl Gasoline, 3 cents off tank wagon price; Red Crown gasoline, 2½ cents off tank wagon price; Stanolind Blue gasoline, 1 cent off tank wagon price. On deliveries of 75,000 gallons or more each classification allowed 1 cent additional discount.

Discounts on resellers authorized agent's agreement: Same amounts as above except made off service station price instead of tank wagon price.

Stanolind Furnace Oil in Chicago

Effective November 1, 1932, prices f.o.b. Chicago, tank wagon prices: No. 1 (36-40 lt. stw. zero), 100 gallons or more, 7 cents; No. 2 (30-34 stw. zero), 150 gallons or more, 6½ cents; No. 3 (22-26 zero), 400 gallons or more 5.75 cents; No. 4 (12-16 zero), 400 gallons or more, 4.75 cents. Viscosity of No. 4, 90-115 at 100° F.

Fuel Oils

Chicago Oil Heat Institute Prices

Spot market prices on 350 gallons or over deliveries, and top prices on contracts, respectively: 38-40, 7 and 8 cents; 32-36 light, 6¾ and 7¾ cents; 32-36 dark, 6½ and 7½ cents; 28-30, 5¾ and 6¾ cents; 24-26, 5 and 6 cents; 18-22, 4¾ and 5¾ cents. On deliveries of less than 350 gallons the spot price is one-half cent higher.

Southwestern District

MAGNOLIA PETROLEUM CO.

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Dallas, Tex.	13.5	16.0	5.0	7.0
Fort Worth	13.5	16.0	5.0	7.0
Houston	13.5	16.0	5.0	8.0
San Antonio	13.5	16.0	5.0	9.0
El Paso	15.0	17.0	5.0	10.0
Texarkana	*16.0	16.0	5.0	†11.0
Muskogee, Ok.	12.5	15.0	5.0	7.0
Okla. City	13.5	16.0	5.0	8.0
Tulsa	13.5	16.0	5.0	8.0
Ft. Smith, Ark.	*15.5	15.5	5.0	†10.0
Little Rock	*17.5	17.5	7.0	†10.0

*Less 2½ cents to dealers. †Less 2 cents to dealers.

Southern District

STANDARD OIL CO. (KENTUCKY)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Atlanta, Ga.	20.0	20.0	7.0	11.0
Augusta	20.0	20.0	7.0	11.0
Macon	20.0	20.0	7.0	12.0
Savannah	20.0	20.0	7.0	12.5
Birm'ham, Ala.	21.0	21.0	7.0	11.0
Mobile	21.0	21.0	7.0	10.0
Montgomery	22.0	22.0	7.0	13.5
Jackson, Miss.	20.0	20.0	7.0	10.0
Vicksburg	20.0	20.0	7.0	10.5
Jack'ville, Fla.	19.0	19.0	8.0	12.0
Miami	20.0	20.0	8.0	12.5
Pensacola	18.0	18.0	8.0	11.5
Tampa	20.0	20.0	8.0	13.0
Lexington, Ky.	18.5	18.5	6.0	10.5
Covington	19.0	19.0	6.0	10.5
Louisville	17.0	17.0	6.0	9.0
Paducah	19.0	19.0	6.0	8.0

A third grade "Kyso Green" is sold at a price generally 2 cents below the price on the regular grade.

In addition to the state tax of 4 cents on gasoline, Montgomery has city and county tax of 2 cents on gasoline and one-half cent on kerosene. Kerosene prices in Georgia include 1-cent tax. In Florida, an inspection fee of 0.125 cent; in Alabama, an inspection fee of one-half cent on kerosene and one-fortieth cent on gasoline. To Pensacola, Montgomery and Birmingham state taxes add 1-cent tax. To Mobile state tax add 1-cent city tax. Dealers receive discount of 3 cents off tank wagon price throughout territory.

Rocky Mountain District

CONTINENTAL OIL CO.

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Denver, Colo.	16.0	19.0	5.0	12.5
Pueblo	16.0	19.0	5.0	12.5
Grand Jctn.	20.0	23.0	5.0	14.5
Casper, Wyo.	17.0	20.0	5.0	10.0
Cheyenne	16.0	19.0	5.0	11.5
Butte, Mont.	20.0	23.0	6.0	17.0
Billings	22.0	25.0	6.0	15.5
Great Falls	23.0	26.0	6.0	17.0
Helena	23.0	26.0	6.0	17.0
Salt Lake, Utah	18.0	21.0	5.0	16.0
Albu'que, N. M.	17.0	20.0	*7.0	14.0
Boise, Idaho	19.5	22.5	6.0	18.0
Twin Falls	19.5	22.5	6.0	18.0

*One-cent city tax.

Central South District

STANDARD OIL CO. (LOUISIANA)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
N. Orleans, La.	16.5	16.5	*7.0	†12.0
Baton Rouge	17.0	17.0	6.0	†11.0
Alexandria	15.0	15.0	7.0	†11.0
Lafayette	18.0	18.0	7.0	†11.0
Lake Charles	18.5	18.5	7.0	†11.0
Shreveport	16.5	16.5	6.0	†11.0
Knoxville, Tenn.	20.5	20.5	8.0	11.5
Memphis	16.0	16.0	8.0	10.0
Chattanooga	20.5	20.5	8.0	12.5
Nashville	20.5	20.5	8.0	12.5
Bristol	20.0	20.0	8.0	13.0
Lt. Rock, Ark.	18.5	18.5	7.0	9.0

*Includes city tax of 1 cent. †Louisiana kerosene prices include 1-cent state tax. New Orleans kerosene price also includes 1-cent city tax.

Two-cent discount off kerosene tank wagon price and 2½ cents off gasoline tank wagon price to dealer and commercial accounts.

Ohio

STANDARD OIL CO. (OHIO)*

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Ohio points	17.5	18.0	5.0	*12.0

*Two cents off on gasoline tank wagon to dealers and commercial accounts; 2½ cents off tank wagon on kerosene to dealers.

Nebraska

STANDARD OIL CO. (NEBRASKA)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Omaha	16.9	17.9	5.0	10.25
McCook	19.0	19.0	5.0	11.75
Norfolk	18.75	18.75	5.0	10.75
N. Platte	19.0	19.0	5.0	11.5
Scottsbluff	19.0	19.0	5.0	11.25

Note—Dealers' discount allowed as follows: Red Crown Ethyl, 3 cents off station price; Red Crown, 2½ cents off normal service station price; Nebraska Blue (third grade), 1 cent off normal service station price.

New York and Part of New England District

STANDARD OIL CO. (NEW YORK)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Albany, N. Y.	15.5	16.5	4.0	9.0
New York	16.0	16.0	4.0	9.5
Buffalo	16.5	17.5	4.0	9.0
Rochester	16.5	17.5	4.0	9.0
Syracuse	16.5	17.5	4.0	9.5
Boston, Mass.	15.0	16.0	4.0	8.0
Augusta, Me.	18.0	19.0	4.0	9.0
Mach'tr, N. H.	18.0	19.0	5.0	8.0
Burlington, Vt.	18.5	19.5	5.0	8.5

Atlantic Coast District

STANDARD OIL CO. (NEW JERSEY)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Atl'tic City, N. J.	15.7	16.7	4.0	11.2
Newark	15.0	16.0	4.0	8.5
Annapolis, Md.	16.3	17.3	5.0	10.0
Baltimore	15.7	16.7	5.0	8.0
Cumberland	17.2	18.2	5.0	11.7
Wash'g'n, D. C.	14.2	15.2	3.0	10.0
Danville, Va.	18.4	19.4	6.0	11.9
Norfolk	16.8	17.8	6.0	10.3
Petersburg	17.9	18.9	6.0	11.4
Richmond	17.2	18.2	6.0	10.7
Roanoke	18.4	18.4	6.0	11.9
Charles'n, W.Va.	17.1	18.1	5.0	11.6
Parkersburg	15.7	15.7	5.0	10.2
Wheeling	16.7	16.7	5.0	11.2
Charlotte, N. C.	20.0	21.0	7.0	12.5
Hickory	20.2	21.2	7.0	12.7
Mt. Airy	20.3	21.3	7.0	12.8
Raleigh	19.8	20.8	7.0	12.3
Salisbury	20.1	20.1	7.0	12.6
Charleston, S.C.	17.8	18.8	7.0	10.3
Columbia	19.7	20.7	7.0	12.2
Spartanburg	20.0	21.0	7.0	12.5

Two cents per gallon discount off tank wagon price of gasoline to dealers except Washington, D. C., and Baltimore, Md., where discount is 3 cents. Kerosene 1 cent off tank wagon for 25 gallons or more under contract except New Jersey.

Naphtha

	Tank—Wagon	Car
Oleum spirits	10.7	6.23
V.M.P. naphtha	12.7	7.23
Cleaners' naphtha	15.2	9.23
Stanisol	15.2	9.23

Tank wagon prices f.o.b. Chicago January 6, 1932. Each of above prices subject to discount of 1 cent per gallon for 150-gallon lots if covered by contracts.

Pacific Coast Territory

STANDARD OIL CO. OF CALIFORNIA*

	Gasoline			Kero.
	Tank truck†	Posted retail	Incl'ds tax of	tank wagon
Fresno	19.5	18.5	4.0	17.0
San Francisco	19.0	18.0	4.0	15.5
Los Angeles	18.5	17.5	4.0	15.5
Reno, Nev.	23.0	22.0	5.0	19.0
Portland, Ore.	20.0	19.0	5.0	16.5
Seattle, Wash.	22.0	21.0	6.0	16.5
Tacoma	22.0	21.0	6.0	16.5
Spokane	25.5	24.5	6.0	20.5
Phoenix, Ariz.	19.5	21.5	6.0	20.5

*Retail prices posted by Standard Stations, Inc., a subsidiary.

†Above prices are at company's plant or depots as company does not operate stations. A 4-cent per gallon discount is given dealers and customers taking tank wagon lots except in Phoenix where the discount is 1 cent.

Pennsylvania-Delaware and Part of New England

ATLANTIC REFINING CO.

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Pittsburgh, Pa.	16.5	17.5	4.0	10.0
Philadelphia	16.0	17.0	4.0	10.0
Scranton	16.5	17.5	4.0	10.0
Allentown	16.5	17.5	4.0	10.0
Altoona	16.5	17.5	4.0	10.0
Erie	16.5	17.5	4.0	10.0
Dover, Del.	16.5	17.5	4.0	10.0
Wilmington	16.5	17.5	4.0	10.0
Springf'd, Mass.	16.0	17.0	4.0	8.0
Worcester	16.0	17.0	4.0	8.0
Boston	15.0	16.0	4.0	8.0
Providence, R.I.	14.0	15.0	3.0	8.0
Hartford, Conn.	15.0	16.0	3.0	8.0
New Haven	15.0	16.0	3.0	8.0

Discount schedule effective November 1, 1932. In Delaware and Pennsylvania, 2 cents off station price on purchases of 2,000 gallons or more per month, in remainder of territory 1 cent. Wholesale discount 2½ cents per gallon on monthly deliveries of 20,000 to 100,000 gallons, 3 cents on 100,000 to 300,000 and 3½ cents on more than 300,000 gallons.

CRUDE OIL PRICE CHANGES

The Kanotex Refining Co. in a letter to The Oil and Gas Journal dated November 5 says it did not meet the 12-cent advance posted by several companies in Kansas on October 15. It is still paying the April 11 price, ranging from 76 cents to $1 per barrel.

TANK WAGON CHANGES

Standard Oil Co. of Indiana effective October 21 advanced gasoline service station price 2.4 cents to 17.4 cents at Quincy, Ill.; effective October 29 advanced service station price .9 cent to 14.9 cents at Wichita, Kans.; effective

(Continued on Page 32)

Crude Oil Prices

(Continued from Preceding Page)

by Continental Oil Co. Border and Red Coulee posted by Imperial Refining Co. Lea County, effective October 15, The Texas Company and Shell Petroleum Corp., 75 cents; effective April 11, 1932, Humble Oil & Refining Co., 65 cents. Fort Collins, Wellington, Orchard, Florence, Rattlesnake and Table Mesa by Continental Oil Co. Osage posted by Arro Oil & Refining Co.

Eastern States

JOSEPH SEEP PURCHASING AGENCY
(Effective October 3, 1932)

Pennsylvania Grade Oil in National Transit Lines (Bradford Field)	$1.72
Pennsylvania Grade Oil in Southwest Pennsylvania Lines	1.42
Penna. Grade Oil in Eureka Pipe Line Lines	1.37
Penna. Grade Oil in Buckeye Pipe Line Lines	1.22
Corning Grade Oil in Buckeye Pipe Line Co.'s line (Oct. 4, 1932)	.85
Ragland Grade Oil in Cumberland Pipe Lines (Kentucky) (Jan. 10, 1931)	.60

PENNZOIL CO.
(Effective October 3, 1932)

Pennsylvania Grade Oil in National Transit Lines:	
Group A (Includes Cochran, Franklin, Hamilton and Doolittle districts.)	$1.67
Group B (Includes Titusville district.)	1.66
Group C (Includes Turkey and Tidiout districts.)	1.65
Group D (Includes Bear Creek and Porkey districts.)	1.64
Group E (Includes Eldenau, Bull Creek, Rough Run, Carbon, Dipner, Bredin, McJunkin, Jamison, Kennerdell, Emlenton, Tiona, Lacy and Kinzua districts.)	1.62

Price depends on length of pipe line haul to plant at Oil City.

TIDE WATER PIPE CO.
(Effective October 3, 1932)

Bradford, Pa.	$1.72
Allegany, N. Y.	1.72

PURE OIL CO.
(Effective October 3, 1932)

Cabin Creek, W. Va.	$1.37
Bradford Hollow, W. Va.	1.37
Kelly's Creek, W. Va.	1.37

Middle Western States

OHIO OIL CO.
(Effective April 11, 1932)

Lima	$1.15
Wooster	1.25
Illinois	1.10
Indiana	.75
Princeton	1.10
Plymouth	Shut in
Western Kentucky	1.05
Midland, Mich. (July 13, 1932)*	.85
Muskegon (July 14, 1932)† Mid-Continent gravity scale	
Muskegon (June 30, 1932)‡	.95
Somerset, Ky. (Apr. 25, 1932)	.85
Hart County, Ky. (June 10, 1932)§	1.00

*Posted by Pure Oil Co. Old Dutch Refining Co. pays 20 cents per barrel over Pure Oil Co.'s posted price. †Naph.-Sol Refining Co. ‡Old Dutch Refining Co. §Posted by Stoll Refining Co. Somerset, Ky., crude purchased by Ashland Refining Co., Ashland, Ky., and delivered through own pipe line.

Mexico

Panuco*	$0.42

*F.o.b. ship, based on September transactions and exclusive of production and export taxes and bar dues.

Canada

Ontario (Nov. 3, 1931):	
Petrolia*	$1.90
Oil Springs*	1.97
Alberta (Apr. 22, 1932):	
Turner Valley†:	
Crude oil 40-44.9	1.56
Crude oil 45-45.9	2.18
Crude oil 50 and above	2.80
Crude naphtha	3.32
Discolored naphtha	3.08

*Imperial Oil, Ltd. †Imperial Oil, Ltd., and Regal Oil & Refining Co.

A· P· I·

13TH ANNUAL MEETING
Houston

NOVEMBER 15-17

THE HUMBLE OIL AND REFINING COMPANY extends to visiting members of the American Petroleum Institute a cordial welcome to Houston and a sincere invitation to make use of the Company's facilities while you are here.

If there is anything the company or its personnel can do to make your stay in our home city more enjoyable, just tell any Humble man, or call us on 'Phone Capital 2151.

HUMBLE OIL & REFINING COMPANY
HOUSTON

NEWS FOR PETROLEUM REFINERS

Sales of Premium Gasoline Hampered by Varying Margin

NEW YORK, Nov. 8.—Eastern marketers, who have been endeavoring to stimulate their premium motor fuel gallonage, are finding themselves confronted with the problem of adjusting profit margins if they are to secure the co-operation of retail station operators in their sales drive.

In the larger centers of distribution in the East, marketers are allowing their retail distributors a profit margin of 3 cents per gallon on their regular grades, and the same allowance on premium gasoline. Under these conditions, and with practically all of the marketers and refiners having repeatedly assured the motoring public that their "regular" grades "have everything" and are "equal to many premium fuels selling at 3 cents per gallon more," retail distributors are loath to talk the merits of Ethyl blends, which sell at 3 cents per gallon more than regular grades, and net the retailer the same profit.

The contracts of Ethyl Gasoline Corp. with their refiner-licensees specify the maintenance of a spread of "at least 2½ cents per gallon" between the next best grade and Ethyl. In many parts of the Mid-Continent area, dealers are receiving an additional one-half cent per gallon margin on Ethyl Gasoline areas, and it is understood that the percentage of Ethyl Gasoline sales in that area is considerably ahead of that in the East.

Marketers in Atlantic Seaboard territory, however, have consistently refused to follow the Mid-Continent plan, and as a result are receiving but a minimum of dealer co-operation in their attempt to boom Ethyl sales.

If the campaign for increased sales of premium grades is to receive any momentum in the East, it is felt, some rearrangement of profit margins to the dealers must be made. Marketers here feel that to give their dealers an extra margin of 1 cent per gallon on premium gasoline would mean a reduction in profits necessitating a sharp increase in sales to overcome, and are reluctant to take this step feeling that the increase in gallonage would not compensate for the lower profit margin.

It is considered possible, however, that the marketing situation might be simplified by a general reduction of 1 cent per gallon in the existing profit margin on regular gasolines, which would make it possible for marketers to give their dealers an extra profit of one-half or 1 cent per gallon on premium blends. At present selling prices for gasoline in eastern territory, a retail profit of 3 cents per gallon is out of line, but under existing competitive conditions major companies naturally hesitate to take the lead in any action which might jeopardize their existing retail outlets.

ADOPT NEW ZONING SYSTEM

NEW YORK, Nov. 7.—Tide Water Oil Co., for the purpose of mechanical work, has divided its Bayonne refinery into three zones. In each zone is a supervisor who is responsible for all mechanical work, both maintenance and new construction, done in that area. This embraces the responsibility for costs, planning of work, movement of working forces and general mechanical conditions in the zone.

Zone supervisors report and are responsible to a central zoning officer whose duty it is to plan for all maintenance and construction work in the plant.

Announce Important Rulings Regarding Tax on Benzol and Lubricating Oils

By CHARLES E. KERN
Washington Bureau, The Oil and Gas Journal

WASHINGTON, D. C., Nov. 5.—Two interesting decisions for the oil industry have been rendered by the Bureau of Internal Revenue, relating to the manufacturers' excise taxes on lubricating oils and to the use of the terms motor benzol and industrial benzol, under Section 617 relating to the tax on gasoline.

In the first instance advice was requested concerning the distinction between a compounder and a blender of lubricating oils as those terms are used in Treasury Decision 4,339.

The necessity for distinguishing between a compounder and a blender of lubricating oils arises in the application of Section 620 of the Revenue Act of 1932, relating to the sales of taxable articles for further manufacture. This section provides in effect, that an article subject to tax under the Revenue Act of 1932, with certain exceptions, may be sold tax free where such article is sold for use as material in the manufacture or production of, or for use as a component part of, an article to be produced by the vendee which will be subject to tax.

"In determining the application of Section 620," the decision states, "it is necessary that consideration be given to the question of what constitutes further manufacture in the case of lubricating oils. The bureau has reached the conclusion that a person who merely blends taxable lubricating oils—that is to say one who merely mixes two or more varying lubricating oils—is not a manufacturer or producer of lubricating oil, and, consequently may not buy lubricating oils tax-free for the purpose of such blending. However, a person who by means of a process of compounding or other manipulation involving substantially more than the mere mixing of taxable oils, or one who mixes taxable oils with other substances, is a manufacturer or producer of lubricating oil, and may buy lubricating oils tax free where such oils are to be used in the compounding or production of other articles subject to tax."

The other decision relating to the taxability of motor benzol and industrial benzol, declares:

"It appears from the information submitted that there are two distinct grades of the commercial product benzol, namely, motor benzol and industrial benzol, and that they differ substantially in physical and chemical characteristics as well as in their names. It is understood that motor benzol, as the name implies, is a fuel for motor vehicles, while industrial benzol is not suitable for use as a fuel for propulsion of motor vehicles, motor boats or airplanes.

"Under these circumstances, all sales of motor benzol by the importer or producer are subject to the tax on gasoline imposed by Section 617 of the Revenue Act of 1932, and sales of industrial benzol are not subject to the tax.

"If, however, any portion of industrial benzol sold tax free is further processed, manufactured, blended, or compounded until it becomes suitable for use as a fuel for the propulsion of motor vehicles, motor boats, or airplanes, sales and uses by the producer of the product so further manufactured, compounded, blended or processed will be subject to the tax."

Sinclair and Standard Oil Raise Bids for Richfield

NEW YORK, Nov. 5.—Following the recent action by Standard Oil Co. of California in matching the previous high offer of the Sinclair interests for acquisition of Richfield Oil Co. of California, now in receivership, Consolidated Oil Corp. has again raised its bid by $4,900,000.

The latest Standard of California bid offered the equivalent of $22,500,000 in the form of $17,500,000 of 5 per cent debentures of a new Richfield Oil Co. and 200,000 shares of Standard Oil of California stock, worth approximately $25 a share, in addition to $5,000,000 to pay nonparticipating, unsecured creditors and bondholders, in return for which Standard of California would withdraw debentures in an equivalent amount.

To this, the Sinclair group has responded by offering debentures totaling $25,000,000, bearing 6 per cent interest, and maturing in 20 years, 400,000 shares of Consolidated Oil Corp. common stock, and cash up to $10,000,000 for settlement with unsecured creditors who do not participate in the plan for preference claims and expenses, the total of the debentures to be reduced by the extent that cash is used in the satisfaction of claims. Figuring Consolidated common at its present market price of $6 a share, the new Sinclair bid for Richfield is equivalent to $27,400,000, in addition to increasing the cash consideration to a maximum of $10,000,000 and raising debenture interest from 5 to 6 per cent.

BARNSDALL MAY BUY LION

The Barnsdall Oil Corp. may acquire control of the Lion Oil Refining Co. of El Dorado, Ark., according to reports the first of the week. It was stated officially that negotiations were under way but had not been completed.

The Barnsdall corporation is one of the largest independent companies in the Mid-Continent Field with large holdings in California. The Lion company for several years has operated a 10,000-bbl. refinery at El Dorado and also has producing and marketing properties.

TO BUILD NEW REFINERY

The V. O. E. Refining Co. of Gladewater, Tex., will lay approximately 12 miles of 4-inch line from west Gregg County, near Gladewater, to Big Sandy, where it contemplates building a 2,000-bbl. refinery on the St. Louis-Southwestern Railway. The company is now operating a 5,000-bbl. plant at Gladewater. V. O. E. Wright is president of the company.

FURNISH GAS TO ROBINSON

The Lincoln Oil Refining Co. is selling part of the fixed gas production at its Robinson, Ill., refinery to a gas company serving the city of Robinson. In the October 13 issue of The Oil and Gas Journal it was incorrectly reported that this gas was being furnished the city of Lawrenceville, Ill. The Lincoln company for several years has owned and operated a refinery at Robinson.

Decline in Silver Exchange Presents an Export Problem

WASHINGTON, D. C., Nov. 7.—Soviet Russian competition and the heavy decline in silver exchange are creating a problem for American oil exporters.

The heavy decline in silver exchange has forced prices up and has discouraged the consumption of petroleum products by the Chinese, who, in many instances, have reverted to the use of vegetable oils such as the soy bean oil and tung oil, according to advices just received here. An additional burden for the exporter of petroleum products to China is the high import duty in the Shanghai area and the requirement that this duty must be paid in gold. This requirement has greatly discouraged importations.

The oil trust of the Soviets has been preparing for some time to enter the Chinese market with gasoline through their own connections in Shanghai, where their distribution facilities are through Kwang Hua, a Chinese company. So far they have not met marked success although they are offering gasoline in cases at almost three-fourths of a cent a gallon below the June level of prices.

In coming into this trade the Soviet oil trust has competed with American companies and the Royal Dutch Shell. In 1931 out of a total of 706,000 bbls. the United States supplied 303,000 bbls. and the Soviet trust less than 16,000 bbls. of gasoline.

In the case of kerosene out of a total importation of 4,040,000 bbls. the United States supplied 2,542,000 bbls. and Russia 132,000 bbls. of imports into China as a whole.

Competition in India is also growing more active than ever before. There the Burma Shell Oil Storage Co. has recently reduced the price of gasoline 21 per cent in Bombay.

Recently, through the Western India Oil Distributing Co., Russian gasoline has been introduced in India.

Largest Cracking Chamber Arrives at Tulsa Refinery

What is said to be the largest cracking chamber ever built arrived this week at the West Tulsa refinery of the Mid-Continent Petroleum Corp. from the Milwaukee plant of the A. O. Smith Corp., manufacturers of high-pressure refinery equipment. The new still exceeds in size a unit installed last year at the Mid-Continent refinery which at that time was said to be the largest pressure chamber ever built for petroleum refining.

According to the manufacturers, the still weighs 423,000 pounds. It is 68 feet long with an inside diameter of 10 feet 7 inches with walls of heat treated steel 3½ inches thick. It was mounted on two specially built flat cars each with 16 wheels. The C., M. St. P. & P. Railroad built a swivel arrangement under the center of the two cars to carry the shipment around curves.

COMPLETE COKE TIPPLE

HOUSTON, Tex., Nov. 8.—Shell Petroleum Corp. has just completed and put in operation a new coke tipple at its Houston refinery. The tipple has a capacity of 200 tons hourly which is one of the fastest and most modern in existence.

E. B. KERSHNER PASSES ON

E. B. Kershner, engineer for the Empire Oil & Refining Co., died at his home in Tulsa early Tuesday morning. Death came sudden as he had been in good health.

NATURAL GASOLINE MANUFACTURE

Relation of Yield to Vapor Pressure to Be Investigated

The technical committee of the Natural Gasoline Association of America is undertaking a second and more comprehensive survey of plant operations in the Mid-Continent area for the purpose of ascertaining whether a rather exacting relationship exists between the quantity of gasoline produced and its vapor pressure. This study was undertaken more than a year ago and it was found that generally speaking the volume of natural gasoline produced was increased or decreased 3 per cent for each 1-pound change in the Reid vapor pressure. It was stated that, roughly, if 100 gallons of gasoline of 26-pound vapor pressure could be made from a given volume of wet gas under ordinary plant operating conditions, that same volume of gas would yield but 97 gallons of 25-pound natural gasoline.

An effort was made as a result of this relationship, to establish a price relationship on all grades using the spot price for the 26-70 grade as the basis. Early in the year this practice was generally used and rather exacting price differentials were observed by salesmanagers. Later in the year certain manufacturers questioned the accuracy of this relationship with respect to their own operations. The problem of pricing was further complicated by the introduction of abnormally low vapor pressure naturals for use as motor fuels direct or for use with refinery naphthas in very large proportions.

The introduction of these factors together with the improvement in operating conditions which came with time caused a growing tendency for manufacturers to question the accuracy of applying the 3 per cent change in volume for each 1-pound change in vapor pressure.

The technical committee will undertake to fractionally analyze the gas from every important field in the Mid-Continent area and will attempt to correlate their laboratory findings with actual plant yields. These laboratory tests will also include taking the Reid vapor pressure of the products and their distillation range. Special study will be given to those gases which contain abnormally high or low percentages of any fraction with respect to the other fractions present.

Thus, it will be determined what effect on general plant yields will result when a gas of unusually high butane content is being processed, when one of unusually high pentane ratio is processed, etc. These data will be collected from as many plants as practicable and the laboratory tests made by the technical committee will be studied and correlated with the plant data.

A subdivision of the technical committee has been formed for the purpose of speeding up the work and includes R. C. Alden of the Phillips Petroleum Co. as chairman, E. L. Stauffacher of the Empire Oil & Refining Co., J. W. Vaiden of Skelly Oil Co., J. L. Gallagher of Sinclair Oil & Gas Co. and R. E. Baker of the Shell Petroleum Corp.

The laboratories of these companies will be used by the joint committee for all the work of analyzing samples of both gas and the liquid products.

NEW EAST TEXAS PLANT

Johnson Brothers of Tyler have a 60-day option on a 2,000,000-foot gasoline plant on which H. H. Adams of Fort Worth started construction in the Kilgore area, Gregg County, and are completing construction of the plant which will soon be ready to operate.

Stocks of Natural Gasoline Reduced to Lowest Point at End of September

By the close of September manufacturers reduced natural gasoline stocks to the lowest point so far this year and at that time were 1,000,000 gallons less than stocks a year ago. Although the decrease during the month was less than the monthly decline that has been registered since May it is viewed optimistically. The industry usually witnesses a marked improvement in demands during October and November and with production continuing to be curtailed there is every likelihood that further reductions in stocks will be made and this in turn will have a beneficial effect on prices.

During September 117,300,000 gallons of natural gasoline were manufactured compared with 118,400,000 gallons in August. This represents a slight decrease but is accounted for by the shorter month. The daily production in September actually shows an increase over the previous month.

California contributed most toward balancing the supply and demand for the month. Production there was decreased 1,700,000 gallons, this drop being accounted for by the lesser production in the larger fields, including Kettleman Hills and Long Beach in particular. Production in these areas continues to be greatly curtailed because of the proration of the crude output. Also there is little incentive to expand operations because of the relatively low prices existing in that area.

Texas production also showed a marked reduction, this amounting to 1,000,000 gallons, and is accounted for principally by the lower output in the Panhandle area. Here the output for September totaled 28,300,000 gallons compared with 29,300,000 gallons in August.

The East Texas Field fails to add to the total production of natural gasoline for the State despite the increase in the number of completed wells and the fact that more than 8,500 wells have been drilled. This can be explained by a review of conditions in the field and bears out the opinion generally expressed by operators two years ago, when the field ws in the initial stages of its development, to the effect that the East Texas Field will not prove to be a direct hazard. The relatively low gas pressure in the field is being utilized to produce a maximum ultimate recovery of oil. The increased number of wells over a large area has hindered rather than aided in gathering the gas produced and transporting it to a recovery plant. As the number of wells has been increased, the production per well has been decreased until now it requires such a complicated network of gathering lines to collect enough gas to support a plant that it is not practicable.

The increase in the output of Oklahoma of from 28,700,000 gallons in August to 29,800,000 gallons in September is accounted for in the larger production in the Osage Field. There was no increase in the number of plants nor is it thought that there was any large increase in the volume of gas processed.

Some of the more important manufacturers who were making a low vapor pressure product in August revised their plant operations so as to make the 18-pound and 26-pound grades, and this probably accounts for a major portion of the increase in the total output.

Slight increases were also reported for the Seminole Field and Oklahoma City Field and the same trend toward manufacturing gasolines of a higher vapor pressure in these fields accounts for the larger output. The output of the smaller fields in Oklahoma remains practically constant.

Kansas plants report a slight increase in the September output over that of August, but the decline in the production of that State is again emphasized by noting the September production of a year ago as 2,600,000 gallons and this year 1,700,000 gallons.

Louisiana and Arkansas each reported a small decline in the September output compared to August. Over a period of the past year the loss in the Louisiana production is rather high, dropping from 4,300,000 gallons in September, 1931, to 3,500,000 gallons in the same month this year. Stocks of natural gasoline have continued to decline since May and the

(Continued on Page 36)

NATURAL GASOLINE STATISTICS FOR SEPTEMBER
(Thousands of gallons)

	Natural gasoline: Production Sept., 1932	Production Aug., 1932	Production Sept., 1931	Production Jan.-Sept., 1932	Stocks end of month Sept., 1932	Stocks end of month Aug., 1932	Blended motor fuel Sept., 1932: Natural gasoline used	Naphtha or other oils used	Stocks end of month
Appalachian	**3,800**	**3,800**	**4,400**	**48,200**	**1,606**	**2,335**	**40**	**62**	**82**
Ill., Ky., Ind.	**760**	**500**	**700**	**5,800**	**222**	**152**	...	...	...
Oklahoma	**29,800**	**28,700**	**26,500**	**287,700**	**10,849**	**11,898**	**48**	**64**	**80**
Oklahoma City	5,600	5,500	800	57,800	1,530	2,101	...	...	...
Osage County	4,400	3,600	5,200	36,100	1,443	1,149	5	3	7
Seminole	8,900	8,600	9,500	87,200	4,968	5,426	1	...	...
Rest of State	10,900	11,000	11,000	106,600	2,908	3,222	42	61	73
Kansas	**1,700**	**1,600**	**2,600**	**18,300**	**910**	**996**	**26**	...	**39**
Texas	**28,300**	**29,300**	**32,700**	**265,200**	**7,019**	**7,079**	**32**	**5**	**6**
Panhandle	13,100	14,000	16,600	128,400	3 932	3,485	1	2	...
North Texas	2,000	1,900	2,600	19,100	364	703	3	...	3
West Central	7,100	6,800	7,700	65,200	2,063	2,028	28	3	3
Rest of State	6,100	6,600	5,800	52,500	660	863	...	...	...
Louisiana	**3,500**	**3,700**	**4,300**	**36,400**	**820**	**576**	...	...	...
Arkansas	**1,500**	**1,600**	**1,900**	**15,200**	**268**	**242**	...	...	**3**
Rocky Mountain	**5,700**	**5,200**	**6,400**	**46,200**	**666**	**366**	**13**	**6**	**8**
California	**42,300**	**44,000**	**51,000**	**415,400**	**2,268**	**2,244**	...	...	...
Huntington Beach	1,400	1,400	1,700	13,100	.....	.....	...	...	...
Kettleman Hills	10,200	10,700	11,700	101,300	.....	.....	...	...	...
Long Beach	8,000	8,500	9,900	81,000	.....	.....	...	...	...
Santa Fe Springs	7,700	8,100	9,500	76,000	.....	.....	...	...	...
Ventura Avenue	3,000	2,900	4,400	29,600	.....	.....	...	...	...
Rest of State	12,000	12,400	13,800	114,400	.....	.....	...	...	...
Total	**117,300**	**118,400**	**130,500**	**1,138,400**	**24,628**	**25,888**	**159**	**137**	**218**
Daily average	**3,900**	**3,820**	**4,350**	**4,150**	.....	.....	**5**	**5**	...
Total (thousands of bbls.)	**2,793**	**2,819**	**3,107**	**27,105**	**586**	**616**	**4**	**3**	**5**
Daily average	**93**	**91**	**104**	**99**	.....	.....	...	...	...

Panhandle Field to Remain Shut In Until Final Order

AUSTIN, Tex., Nov. 5.—Today a three judge Federal court ordered a temporary injunction continued in effect, pending final decision on the application of Texhoma Natural Gas Co., Cities Service Co. and others for a permanent injunction restraining enforcement of a Railroad Commission order closing a portion of the West Panhandle natural gas field and restricting the rest of the field to 4 per cent of potential production until such time as connections were made to all wells of independent operators in the area.

R. E. Hardwicke, for independent gas operators, and Asst. Atty. Gen. Maurice Cheek, for the Railroad Commission, made arguments before the court. E. T. Harrington, owner of 10 unconnected wells, was the only witness.

S. A. L. Morgan, attorney for the Texhoma company, and Lloyd Price, attorney for the Cities Service Co., submitted in pleadings to the court that the Railroad Commission was still trying to apply the void common purchaser law to the gas field, to force the exporters to buy from other producers. "The sole purpose of the order," Price argued, "was to shut down production until 31 unconnected wells got connections."

Mr. Harrington in his testimony said during the two years his wells have been without connections, 14 per cent a year of the gas in his tract had been drained out by the adjoining major operators.

The companies contended, in getting a temporary injunction recently and in now trying to have the court make it permanent, that the Railroad Commission order prevented their producing the 50,000,000 feet daily they require to export from the State. They are limited, attorneys set out, to producing about 19,000,000 feet, and are forced to get elsewhere the rest of their requirements.

The controversy arose in the field over which the state comptroller and attorney general's department recently conducted investigations in other states in connection with the taxes paid the State on gas produced from the exporter's own wells, when a 2 per cent tax was tendered the State on a price basis of 3 cents per 1,000 feet, on the same gas resold through subsidiary and interrelated companies, and finally retailed in Chicago at $1.50 per 1,000 feet.

MONTANA GASOLINE PLANT

CHATHAM, Ontario, Nov. 5.—Montana Power Co. has announced plans for construction of a six-unit absorption plant 4 miles east of Cut Bank to extract gasoline from its gas wells in the Montana fields. Contract for the plant has been let to the Stearns-Roger Co. of Denver, according to a statement of Frank Bird, Montana Power Co. executive. The company's wells have a rated open flow of 230,000,000 feet a day.

EXCELSIOR EXTENDS LINES

The Excelsior Gasoline Co. is processing approximately 2,000,000 feet of casinghead gas per day in its 6,000,000-foot capacity absorption gasoline plant in the Joiner area, Rusk County, of the East Texas Field. C. L. MacKinnon, superintendent, is operating six units, using Clarke twin cylinder engines. More construction work on the plant is now under way. Approximately 3 miles of 2-inch line carries gasoline from the plant to a six-car loading rack at Poindexter Switch from which point it is loaded into tank cars.

Southwest Kansas Rich in Natural Gas; Has Been Developed With Care

DODGE CITY, Kans., Nov. 5.—The territory lying west and south of Dodge City in Ford County, Kansas, containing approximately 250 square miles, has only partly been explored for oil and gas. This area contains the second largest gas field in the United States with a proven area of 60 miles north and south and 30 miles east and west, covering four counties in Kansas and one county in Oklahoma.

This city of 12,000 people, metropolis of western Kansas hard wheat belt, for many years looked forward to the day when oil and gas companies would extend their operations to western and southwestern Kansas. When gas was discovered in commercial quantity and the discovery was followed by the development of a gigantic gas field, Dodge City business men were quick to appreciate what it meant to their trade area to have oil and gas operators investing large capital in opening up the wealth which underlies this part of the State.

No oil has been developed in any of the southwestern Kansas counties, but the territory has more known gas production than the market has been able to absorb.

Indications are that the recent orders of the Texas Railroad Commission will result in an increase in the market outlet for gas from the Hugoton gas field. A number of the pipe line companies which have been taking gas from the Texas Panhandle may change to the Kansas fields. An act of the Texas legislature made gas pipe lines all common carriers. The Railroad Commission of Texas has also ordered a complete shutdown of all the gas wells in the eastern part of the West Panhandle gas field, which has been supplying around 200,000,000 feet of gas a day to out-of the-state points and restricted the rest of the field to 4 per cent of its potential flow. As the result of this action Kansas gas men are expecting some of the pipe lines will purchase gas from the western Kansas gas field.

New Work and Completions

Recent developments reported from this area include a new test in Finney County, southwest of Garden City. The test will be drilled by L. F. Meyers and Joe E. Denham, in the C SW, Section 16-25-34w, on what is believed to be a large structure. Both of these men are well known in the southwestern part of the State. L. E. Meyers has several producing gas properties in the Hugoton gas field and he is one of the owners of a well in Haskell County, which extended the gas area about 15 miles north. The well in Haskell County is located in Section 29-20-34w. The new well, on a lease in Finney County, is located about 30 miles north of the gas well in Haskell County.

A recent completion in Finney County which resulted in a dry hole was the National Refining Co.'s No. 1, in the C SW, Section 12-23-30w, which was drilled to a total depth of 5,872 feet.

The gas field in the southwestern part of the State now covers parts of Stevens, Morton, Seward and Haskell Counties in Kansas, and Texas County in Oklahoma. There have been approximately 115 wells completed in this area and only one well has been a failure, it being on the extreme northwestern part of the field in Morton County.

The 115 wells in the field are estimated to have an open flow capacity of 690,000,000 feet a day or an average of 6,000,000 feet per well per day. Close to 1,000,000 acres of land are considered to be proven for gas. The field has been defined only on the northwest.

Careful Production Methods

The Argus Production Co. which has the largest number of completed wells in the field, has developed these wells under careful engineering advice. It is seldom that any other oil or gas field in Kansas, or in any other state, has followed a more carefully studied engineering plan.

The gas from the Hugoton gas field is sweet, or free from sulphur, and carries 1,100 B.t.u. per cubic foot. The high B.t.u. content of the gas and its sweet quality makes it unusually desirable for shipment to the cities of the North and East.

The gas occurs in a porous siliceous dolomite with beds of sand interspread throughout the dolomite, which varies from 250 to 300 feet in thickness. These wells range in depth from 2,500 feet to 2,850 feet.

One well in Section 10-33-39w, Stevens County, was carried to a total depth of 5,521 feet, in search of deeper pay horizons, but none has been found to date. This well is shut down with all the casing left in the hole. It is believed the Argus Production Co., the owner of the well, plans to resume drilling operations at a later date.

There is a strong possibility that the gas field will be extended into Grant and Stanton Counties on the north, and south into the Oklahoma Panhandle. No limits can be definitely set on the extent of the gas-producing area.

Kansas Ranks High in Oil

Kansas, which has attained fourth place among the states in the volume and value of its agricultural resources, also ranks fourth among the states in oil production at this time, being exceeded only by Texas, California and Oklahoma, and fifth in the total production to date having been exceeded by California, Oklahoma, Texas and Pennsylvania. Its total production up to October 1, 1932, has been 627,903,000 bbls. Much has been accomplished in Kansas in recent years since a more comprehensive knowledge of geological formations has become known through the investigations of individual and company geologists who have worked as pioneers in uncovering the hidden wealth of the State. A large part of this work has been through the organized activities of the State Geological Survey, but it is believed that much further investigation is needed. Large areas in the State, especially in the western part, are practically unknown in a geologic sense, and considerable detailed information is needed in areas already explored.

Exploration for oil in Kansas began over 60 years ago but it was only within the last 15 years that the State assumed its real place among the oil-producing states. In 1918, Kansas produced 45,451,347 bbls. which is a daily average of approximately 124,000 bbls. The State's production fell to 29,671,551 bbls. in 1924, which was the lowest in the last 10 years, but rose to 42,123,000 bbls. in 1930. Kansas can easily produce more now than in 1918, but production is kept down to demand.

There are approximately 22,000 wells in the State, averaging about 4½ bbls. daily.

The oil-producing district in Russell County is the most westerly large pool in the State at this time and it was located by a wildcat test more than 100 miles from any other commercially productive field. It is therefore obvious that the petroleum resources of western Kansas are only partly developed and the few wildcat tests that have been drilled in this large area only indicate that very much remains to be done in further exploration.

For this exploration an authentic record of the results of past drilling, the recording and interpretation of geological information obtained and much detailed study by qualified specialists is required in order to develop the future oil supply which may be derived from the western part of the State.

The development of oil and gas in Kansas has gradually spread westward and deeper pay zones were found. Development in the last three years indicates that a large producing area has been found in the central western part of the State which as yet is only partly developed. In Kingman County oil has been found in the Kansas City-Lansing lime and in the Siliceous lime.

Future Development

Indications that further development work is contemplated in the western counties of the State by companies is revealed by the fact that some of the companies are leaving their equipment on the location after they have completed a dry hole. The Carter Oil Co. drilled a wildcat well in Section 22-29-21w, Ford County to a depth of 6,206 feet, where water was found and the well abandoned, in November, 1931, but the rig and equipment was left on the location.

The discovery well in the southwestern Kansas gas field was drilled southwest of Hugoton, Stevens County, in June, 1927, in Section 31-33-37w, which was estimated to be making between 7,000,000 and 10,000,000 feet of gas at 2,600 feet. This was later followed by other wells, some of enormous capacity, which led to the largest gas field in the State.

California Crude Oil Prices

STANDARD OIL CO. OF CALIFORNIA
(Effective June 26, 1932)

For current purchases of crude oil at the well (unless otherwise specified.) (All gravities above those quoted take highest price offered in that field.)

Gravity—	Signal Hill (Long Beach)	Seal Beach, Alamitos Heights, Huntington Beach	Inglewood	Playa Del Rey	Olinda-Brea Canyon	Torrance	Richfield	Coyote Hills	Santa Fe Springs	Midway-Sunset, Elk Hills, Buena Vista Hills	Lost Hills	Athens, Rosecrans, Dominguez	Montebello	Wheeler Ridge	Coalinga	Whittier-LaHabra
14-14.9	$.65	$.65	$ 65	$.65	$.65	$.65	$.65	$.65	....	$.55	$.55	....	$.65	$ 55	$.55	$.65
15-15.9	.65	.65	.65	.65	.65	.65	.65	.65	....	.55	.55	....	.65	.55	.55	65
16-16.9	.65	.65	.65	.65	.65	.65	.65	.65	....	.55	.55	....	.65	.55	.55	65
17-17.9	.65	.65	.65	.65	.65	.65	.65	.65	....	.55	.55	....	.65	.55	.55	65
18-18.9	.65	.65	.65	.65	.65	.65	.65	.65	....	.55	.55	....	.65	.55	.55	65
19-19.9	.65	.65	.65	.65	.65	.65	.65	.65	....	.55	.55	....	.65	.55	.55	65
20-20.9	.69	.69	.71	.69	.69	.69	.69	.65	....	.59	.59	....	.65	.57	.59	68
21-21.9	.74	.74	.77	.74	.74	.74	.74	.66	....	.63	.63	....	.67	.60	.62	.72
22-22.9	.79	.79	.82	.78	.79	.79	.79	.70	....	.69	.69	....	.70	.63	.65	.77
23-23.9	.84	.84	.88	.82	.84	.84	.84	.76	....	.75	.75	....	.73	.66	.68	.83
24-24.9	.89	.89	.92	.86	.89	.89	.89	.81	$.73	.81	.81	$.89	.76	.69	.72	.89
25-25.9	.93	.93	....	.91	.93	.93	.93	.86	.79	.87	.87	.93	.80	.72	.75	....
26-26.9	.97	.97	....	96	.97	....	....	.90	.84	.92	.91	.97	....	....	....	....
27-27.9	1.00	....	....	....	1.00	....	....	.94	.89	.97	.94	1.00	....	....	....	....
28-28.9	1.03	....	....	....	1.03	....	....	.98	.94	1.02	.99	1.03	....	....	....	....
29-29.9	1.06	....	....	....	....	....	....	1.02	.98	1.07	1.02	1.06	....	....	....	....
30-30.9	1.09	....	....	....	....	....	....	1.05	1.02	1.12	1.05	1.09	....	....	....	....
31-31.9	....	....	....	....	....	....	....	....	1.06	....	....	1.12	....	....	....	....
32-32.9	....	....	....	....	....	....	....	....	1.10	....	....	1.15	....	....	....	....
33-33.9	....	....	....	....	....	....	....	....	1.14	....	....	....	....	....	....	....
34-34.9	....	....	....	....	....	....	....	....	1.18	....	....	....	....	....	....	....
35-35.9	....	....	....	....	....	....	....	....	1.22	....	....	....	....	....	....	....

The Texas Company, effective June 26, posted same prices as the Standard Oil Co. in Signal Hill, Alamitos Heights, Huntington Beach, Torrance, Richfield, Montebello, North Whittier and Santa Fe Springs.

The Union Oil Co., effective June 26, posted the same price as the Standard Oil Co. in the Signal Hill, Alamitos Heights, Seal Beach, Huntington Beach, Athens, Rosecrans, Dominguez, Torrance, Santa Fe Springs, Playa Del Rey, Coyote, Olinda, Brea Canyon, Richfield and Montebello. In Coalinga, Lost Hills, Kern River, McKittrick, Midway-Sunset, Elk Hills and Buena Vista Hills the Union Oil Co. met the Standard Oil Co.'s prices from 14 gravity upward, but posted a price of 50 cents for oil 11 to 13.9 degrees in gravity.

General Petroleum adopted Standard Oil Co.'s prices, effective June 26, in Rosecrans, Signal Hill, Alamitos Heights, Santa Fe Springs, Inglewood, Torrance, Brea Canyon and Olinda, up to 25.9 degrees; Richfield, Midway-Sunset, Kern River, Mount Poso, Round Mountain and Coalinga and posted in Rincon as follows: 22-22.9 degrees, 68 cents; 23-23.9 degrees, 73 cents; 24-24.9 degrees, 78 cents; 25-25.9 degrees, 82 cents; 26-26.9 degrees, 86 cents; 27-27.9 degrees, 89 cents; 28-28.9 degrees, 92 cents; 29-29.9 degrees, 95 cents; 30 degrees and over, 98 cents. In Rosecrans, General Petroleum Co. pays 65 cents for 14 to 19.9 gravity oil; 20-20.9 degrees, 69 cents; 21-21.9 degrees, 74 cents; 22-22.9 degrees, 79 cents; 23-23.9 degrees, 85 cents, and Standard's prices for oil of higher gravity.

Associated Oil Co., effective June 26, met Standard Oil Co.'s prices in Signal Hill, Huntington Beach, Seal Beach, Alamitos Heights, Richfield, Torrance, Inglewood, Athens, Rosecrans, Dominguez, Santa Fe Springs, McKittrick, Kern River, Midway-Sunset, Elk Hills, Buena Vista Hills, Lost Hills, Belridge and Coalinga.

Kettleman Hills—The Union Oil Co., effective June 26, posted 33-33.9 gravity oil at 91 cents; 34-34.9 degrees, 93 cents; 35-35.9 degrees, 95 cents; 36-36.9 degrees, 97 cents; 37-37.9 degrees, 99 cents; 38-38.9 degrees, $1.01; 39 degrees and over, $1.03. Standard Oil Co., Associated Oil Co. and General Petroleum Co. adopted same price schedule on same day.

Santa Paula—The Union Oil Co. and The Texas Company, effective June 26, posted as follows: 14 degrees to 19.9 degrees, 66 cents; 20-20.9 degrees, 69 cents; 21-21.9 degrees, 72 cents; 22-22.9 degrees, 75 cents; 23-23.9 degrees, 78 cents; 24-24.9 degrees, 81 cents; 25-25.9 degrees, 84 cents; 26-26.9 degrees, 87 cents; 27-27.9 degrees, 90 cents; 28-28.9 degrees, 93 cents; 29 degrees and above, 99 cents.

Shields Canyon and South Mountain—The Texas Company, effective June 26, posted same prices as in Santa Paula.

Orcutt—The Union Oil Co., effective June 26, posted prices as follows: 16 degrees to 19.9 degrees, 55 cents; 20-20.9 degrees, 59 cents; 21-21.9 degrees, 63 cents; 22-22.9 degrees, 69 cents; 23-23.9 degrees, 75 cents; 24-24.9 degrees, 81 cents; 25-25.9 degrees, 87 cents; 26 degrees and above, 93 cents.

Playa Del Rey—Subject to a field gathering charge of 5 cents per barrel.

Newhall, McKittrick and Kern River—Standard Oil Co., effective June 23, 1931, posted 55 cents for oil of all grades.

Elwood Terrace—Standard Oil Co., effective June 26, 1932, posts 33-33.9 degrees, $1.04; 34-34.9 degrees, $1.10; 35-35.9 degrees, $1.16; 36-36.9 degrees, $1.22; 37-37.9 degrees, $1.28. All prices f.o.b. ships.

Ventura Avenue—General Petroleum Co. and Associated Oil Co. effective June 26 posted as follows: 22-22.9 degrees, 72 cents; 23-23.9 degrees, 77 cents; 24-24.9 degrees, 82 cents; 25-25.9 degrees, 86 cents; 26-26.9 degrees, 90 cents; 27-27.9 degrees, 93 cents; 28-28.9 degrees, 96 cents; 29-29.9 degrees, 99 cents; 30 degrees and over, $1.02.

Potrero—Associated Oil Co., effective June 26, posted same prices as are paid by all companies in Athens, Rosecrans and Dominguez.

Slightly Higher Crude Runs in Mid-Continent Refineries

(Continued from Page 11)

Company and location—	Daily capacity	Runs November	Runs October
Speedway Gasoline Refining Co., Oklahoma City	400	200	200
Sterling Refining Co., Oklahoma City	2,000	500	600
Sun Oil Co., Yale	5,000	2,500	3,500
Sunray Oil Co. (C. E. Wright, receiver), Allen	7,000	1,500	2,000
The Texas Company, West Tulsa	15,000	4,000	8,000
Texas Pacific Coal & Oil Co., Wynnewood	3,000	1,500	1,500
Tidal Refining Co., Drumright	15,000	8,000	7,000
Western Oil Corp., Beckett	2,000	500	450
Wilcox Oil & Gas Co., Bristow	5,000	3,500	1,000
Wirt Franklin Petroleum Corp., Ardmore	4,000	2,200	2,650
Yale Oil Corp., Yale	2,000	400	600
York Refining Co., Oklahoma City	3,000	(*)	200
Total	309,700	132,950	133,200

*Shut down.

REFINERY OPERATIONS IN NORTH CENTRAL TEXAS
(Plants which have been in operation during the past year)

Company and location—	Daily capacity	Runs November	Runs October
Allstate Refining Co., Thrall	3,000	400	500
American Refining Properties, Wichita Falls	6,000	(*)	(*)
Archer Refining Co., Megargel	1,500	350	350
Atlantic, Pacific and Gulf Refining Co., Wichita Falls	5,000	250	500
Bobrose Oil & Refineries, Brownwood	2,000	(*)	(*)
Continental Oil Co., Wichita Falls	6,000	2,600	3,000
Dale Oil & Refining Co., Electra	4,000	(*)	(*)
Dixon Creek Oil & Refining Co., Kings Mill	3,500	1,500	850
Empire Oil & Refining Co., Gainesville	5,000	2,500	2,500
Falls Refning Co., Wichita Falls	2,000	500	550
Gratex Refining Co., Graham	500	150	150
Gulf Refining Co., Fort Worth	10,000	6,000	6,000
Humble Oil & Refining Co., Breckenridge	2,000	(*)	(*)
Humble Oil & Refining Co., Chilton	4,000	(*)	(*)
Humble Oil & Refining Co., Neches	5,000	1,800	2,600
Iowa Park Producing & Refining Co., Iowa Park	2,500	(*)	(*)
Kent Refining Co., Minerva	2,000	340	300
Kent Refining Co., Angus	4,000	(*)	(*)
LaSalle Petroleum Co., Burkburnett	3,500	300	300
Macmillan Petroleum Co., Isom	8,000	(*)	(*)
Magnolia Petroleum Co., Fort Worth, No. 1	12,000	5,500	5,300
Magnolia Petroleum Co., Fort Worth, No. 2	6,000	(*)	300
Magnolia Petroleum Co., Corsicana	5,000	4,000	4,300
Marathon Oil Co., Fort Worth	5,000	4,000	3,500
Moon Refining Co., Graham	300	50	50
Muenster Refining Co., Muenster	300	(*)	(*)
Olney Oil & Refining Co., Olney	2,500	2,000	1,500
Oriental Oil Co., Dallas	5,000	1,500	1,000
Panhandle Refining Co., Wichita Falls	5,000	1,500	2,000
Petroleum Refractionating Co., Pampa	6,500	5,500	5,500
Phillips Petroleum Co., Isom	18,000	17,000	16,500
Phoenix Refining Co., Inc., Dallas	3,000	600	500
Pilot Point Refining Co., Pilot Point	500	200	300
Primrose Refining Co., Wichita Falls	2,500	(*)	(*)
Shamrock Oil Co., Sunray	4,000	600	600
Sinclair Refining Co., Fort Worth	5,000	2,500	2,500
Simms Oil Co., West Dallas	4,500	3,000	3,000
Southland Refining Co., Olney	1,000	100	100
Star Refining & Producing Co., Fort Worth	1,500	750	500
Taylor Refining Co., Taylor	6,000	1,500	1,500
Taxman Refining Co., Wichita Falls	3,000	3,200	2,500
The Texas Company, Dallas	16,000	12,000	13,000
The Texas Company, Amarillo	4,000	2,500	2,500
Texas Pacific Coal & Oil Co., Fort Worth	3,000	2,000	2,000
Texas Pacific Coal & Oil Co., Caddo	1,000	600	600
Waggoner Refining Co., Electra	3,400	2,500	2,500
Wilcox Oil & Gas Co. (Pampa Refining Co.), Pampa	4,000	(*)	(*)
Young Refining Co., Archer City	250	(*)	(*)
Total	209,800	89,790	89,750

*Shut down.

REFINERY OPERATIONS IN EAST TEXAS
(Plants which have been in operation during the past year)

Company and location—	Daily capacity	Runs November	Runs October
Alamo Refining Co., Camps Switch	2,500	(*)	400
Arrow Refining Co., Overton	2,500	350	850
Beacon Oil & Refining Co., Henderson	2,500	2,000	1,700
Boone Refining Co., Arp	500	1,000	1,000
Constantin Refining Co., Overton	3,000	(*)	(*)
Diamond Refining Co., Overton	3,000	800	800
East Texas Refining Co., Henderson	6,000	2,000	(*)
East Texas Refining Co., Longview	10,000	4,800	(*)
Gladetex Refining Co., Gladewater	500	300	300
Gladewater Refining Co., Gladewater	500	(*)	(*)
Guillory Refining Co., Kilgore	200	90	60
H.&M. Refinery Co., Gladewater	200	140	125
Johnsonville Refining Co., Omega	200	10	60
Kilgore Refining Co., Kilgore	1,500	800	700
Lake Refining Co., Gladewater	500	200	(*)
Overton Refining Co., Overton	3,500	1,300	1,500
Petroleum Refractionating Co., Longview	10,000	(*)	(*)
Sinclair Refining Co., Camps Switch	5,000	1,600	1,900
Southern Oil Refining Co., Kilgore	2,500	1,000	1,000
Taylor Refining Co., Tyler	15,000	7,000	10,000
V.E.O. Refining Co., Gladewater	500	450	600
Total	70,100	23,840	20,995

*Shut down.

REFINERY OPERATIONS IN ARKANSAS
(Plants which have been in operation during the past year)

Company and location—	Daily capacity	Runs November	Runs October
Berry Asphalt Co., Waterloo	2,000	1,000	1,000
Henry H. Cross Co., Smackover	6,000	4,000	4,000
Houston Oil Co., Camden	6,000	(*)	(*)
Kettleman Creek Refining Co., Pearson	5,000	1,500	1,300
Lion Oil & Refining Co., El Dorado	12,000	5,000	5,000
Macmillan Petroleum Products Co., Norphlet	2,000	1,850	2,000
Ouachita Valley Refining Co., El Dorado	2,000	1,200	1,350
Root Refining Co., El Dorado	10,000	2,500	2,500
Simms Oil Co., Smackover	3,000	2,500	2,500
Union Asphalt Co., El Dorado†	....	....	....
Total	48,000	19,550	20,150

*Shut down. †Reduces residuum purchased from Lion Oil & Refining Co., no crude run.

REFINERY OPERATIONS IN WEST TEXAS
(Plants which have been in operation during the past year)

Company and location—	Daily capacity	Runs November	Runs October
Bluebonnett Oil Refining Co., Wickett	5,000	100	100
Bobrose Oil & Refineries, Luling	2,500	1,500	(*)
Burford Oil Co., Pecos City	6,000	(*)	(*)
Coltex Refining Co., Colorado	10,000	5,800	5,400
Concho Refining Co., San Angelo	500	300	300
Cosden Oil Co., Big Spring	15,000	5,000	5,100
Grayburg Oil Co., San Antonio	6,000	700	500
Great West Refining Co., Big Spring	8,500	(*)	(*)
Gulf Refining Co., Sweetwater	5,000	3,000	3,000
Howard County Refining Co.	2,500	(*)	(*)
Humble Oil & Refining Co., San Antonio	5,000	1,300	1,300
Humble Oil & Refining Co., McCamey	15,000	(*)	(*)
Magnolia Petroleum Co., Luling	7,000	4,300	6,000
Marathon Oil Co., Del Rio	5,000	1,500	1,500
Mentone Oil & Refining Co., Mentone	300	100	....
Misko Refineries, Inc., Laredo	1,500	800	850
Octane Refining Co., Beard	2,000	1,000	1,000
Paramount Refining Co., San Angelo	1,500	500	500
Pasotex Petroleum Co., El Paso	14,000	3,000	3,000
Phoenix Refining Co., Pettus	800	600	600
Pioneer Oil & Refining Co., Somerset	1,500	900	600
Richardson Refining Co., Big Spring	6,000	(*)	(*)
Rio Grande Oil Co., El Paso	6,000	800	800
Signal Gasoline Co., Texon	500	(*)	(*)
The Texas Company, San Antonio	3,000	2,500	2,500
The Texas Company, El Paso	2,000	800	800
Tonkawa Petroleum Co., Pyote	5,000	(*)	(*)
Texas Mexican Oil & Refining Co., Laredo	600	400	400
Texas Petroleum Products Co., Somerset	1,500	400	400
Wickett Refining Co., Wickett	2,500	400	400
Total	142,200	35,700	35,050

*Shut down.

Bill Reported Favorably by House Committee

(Continued from Page 8)

to the producers of such commodities," he said.

Market demand for any product "is the amount of that commodity that can be sold at some stated price," he said, advising that such an additional task imposed on the Railroad Commission would, in view of their failure to determine proper allowables to prevent physical waste, be synonymous to asking them "to turn around and do a problem in calculus if they cannot do a simple problem in arithmetic."

Outlining application of the proposed measure, should it become a law, he predicted that "the first man to suffer would be the independent refiner," while the next to fall would be the independent producer, while the large companies with many fields in different states, and also, different countries, would be the last.

Criticism in House

Considerable opposition developed at the house hearing to the proposal to insert the market demand and economic waste provisions in the conservation statutes. C. V. Terrell, chairman, and Ernest O. Thompson of the Railroad Commission and others appeared as witnesses before the house committee on oil, gas and mining.

Some members asked Terrell if market demand and economic waste would not, in reality, be price fixing. Terrell stated he did not believe so, stating inclusion of these provisions would merely "allow" the commission to consider these factors in issuing its orders.

Representative T. H. McGregor of Austin asked Terrell if any machinery was set up in the bill to determine what the market demand was, and if market demand was defined. Terrell replied that market demand was not defined and that he believed the bill contemplated it would be determined by the commission at hearings. McGregor then asked if it would not "take away the monopolistic features" if the commission was given authority to fix the price of refined petroleum products.

Terrell stated that market demand would not be the controlling factor in determining the allowable.

The commission chairman was questioned concerning what part the Oil States Advisory Committee would play in determining the allowable production for Texas. The questions were directed at Terrell by Representative P. L. Anderson of San Antonio.

"Would you deviate from or follow the allowable recommended by the advisory committee?" Anderson asked.

Terrell answered that there was nothing in the bill dealing with the advisory committee and that he knew nothing about it, was not a member of it, and had never attended any of its meetings.

Terrell expressed the belief that a valid order, that would meet the situation and stand the tests of the courts, could be written under the proposed statute, the market demand provisions of which has been upheld by the U. S. Supreme Court in a case appealed from Oklahoma. The Oklahoma statute contains a market demand provision.

"Texas and the oil industry faces a great crisis," Terrell declared.

"For our orders to fall and leave the state without any regulation of production, with consequent open flowing of wells, would be a public calamity." Terrell asserted he believed proration in Texas had resulted in the conservation of 1,000,000,000 bbls. of oil and had prevented the loss of $1,000,000,000 by stabilizing the industry.

Commissioner Thompson urged passage of the bill. He denied the proposed statute would give the commission the right to fix prices, but admitted that it might be construed as having an indirect effect on the price. Thompson said the statute was necessary if East Texas and other fields were to remain under control.

As an auxiliary means to prevent production of oil in violation of state orders, Rep. Milton West, Brownsville, is drawing a bill to levy a graduated tax running to 50 cents a barrel, on oil produced contrary to proration, regardless of the existence of injunction staying enforcement of the orders.

Two new bills pertaining to the oil industry were introduced in the house. One proposed limiting oil output by a graduated gross production tax, with the maximum set at $1 a barrel for all produced over 1,000 bbls. by any well. The tax was 1 cent a barrel for the first 5 bbls. The bill was introduced by Milton West of Brownsville, who said that method of proration will be more effective and desirable than a market demand basis.

J. R. Donnell of Hillsboro introduced a bill directing the Railroad Commission not to allow the retail price of standard grade gasoline to exceed 2½ cents to 20 cents for crude oil, and in limiting the price of lubricating oil to consider the average posted price in comparison with the average price actually paid.

Both bills were referred to the oil, gas and mining committee, although it is considered they are not within the governor's call.

Schofield Will Head East Texas A.P.I.

KILGORE, Tex., Nov. 5.—The East Texas chapter of the American Petroleum Institute held its monthly meeting in the city hall at Kilgore Thursday evening, at which time two papers were read pertaining to problems confronting the production departments of the companies, discussions were held, and new officers were elected. R. W. Taylor, superintendent for the Simms Oil Co., Willow Springs, presided.

J. M. MacQuarrie, production engineer for the Shell Petroleum Corp., read a paper on "Paraffin Accumulation in East Texas Field and Methods of Treatment."

Bob Christy, petroleum engineer for the Amerada Petroleum Corp., read a paper on "Bottom Hole Pressures in the East Texas Field."

Officers elected for the new year are: Chairman, Audrey Schofield of the Gulf Production Co.; vice chairmen, Dal Legan of the Tidal Oil Co. and Paul Brower of the Magnolia Petroleum Co.; secretary-treasurer, R. B. Dean of the Shell Petroleum Corp.

Market Demand Feature of New Texas Measure

(Continued from Page 8)

ance of witnesses and the production of evidence may be required as provided by law. If on the hearing the commission shall find that waste is taking place or is reasonably imminent the commission shall make such rule, regulation or order as in its judgment is reasonably required to correct, prevent or lessen such waste.

Proration Provision

"In the event any rule, regulation or order which the commission may adopt shall require the limitation or fixing of the production of crude petroleum oil or natural gas in any common pool or portion thereof, the commission shall justly and equitably distribute, prorate or otherwise apportion or allocate the allowable production as in its judgment the facts may justly and equitably require. In order to prevent waste or unreasonable discrimination in favor of one pool as against another, the commission is fully authorized and empowered to allocate or apportion the allowable production among the various pools in the state.

"From and after the promulgation of any rule, regulation or order of the commission it shall be the duty of each party affected thereby to comply with the same. The commission may, without notice, revoke any such rule, regulation or order; and it may without notice amend the same, provided the subject matter of the amendment was considered at the hearing made the basis for such rule, regulation or order. The renewal or extension of any rule, regulation or order shall be based on a hearing after proper notice.

"Sec. 5. Section 15 of Chapter 26 of the Acts of the Forty-second Legislature, first called session, is hereby amended so that the same shall hereafter read as follows:

Regulations

"Sec. 15. The commission shall make and enforce rules, regulations or orders for the conservation of oil and gas and to prevent the waste thereof, including rules, regulations of orders for the following purposes:

"(1) To prevent the waste, as hereinbefore defined, of oil and gas in drilling and producing operations and in the storage, piping and distribution thereof.

"(2) To require dry or abandoned wells to be plugged in such a way as to confine oil, gas and water in the strata in which they are found and to prevent them from escaping into other strata.

"(3) For the drilling of wells and preserving a record thereof.

"(4) To require wells to be drilled and operated in such manner as to prevent injury to adjoining property.

"(5) To prevent oil and gas and water from escaping from the strata in which they are found into other strata.

"(6) To establish rules and regulations for shooting wells and for separating oil from gas.

"(7) To require records to be kept and reports made by oil and gas drillers, operators and carriers of oil or gas and by its inspectors.

"(8) It shall do all things necessary for the conservation of oil and gas and to prevent the waste thereof and shall make and enforce such rules, regulations or orders as may be necessary to that end.

"Sec. 6. Section 8 of Chapter 26 of the Acts of the Forty-second Legislature, first called session, is hereby amended so that the same shall hereafter read as follows:

Court Action

"Sec. 8. Any interested party affected by the conservation laws of this state relating to oil or gas and the waste thereof, including this act, or by any rule, regulation or order made or promulgated by the commission thereunder and who may be dissatisfied therewith shall have the right to file a suit in a court of competent jurisdiction in Travis County, Texas, and not elsewhere, against the commission, as defendant, to test the validity of said laws, rules, regulations or orders. Such suit shall be advanced for trial and be determined as expeditiously as possible and no postponement thereof or continuance shall be granted except for reasons deemed imperative by the court. In all trials under this section, the burden of proof shall be on the party complaining of such law, rule, regulation or order and such law, rule, regulation or order so complained of shall be deemed prima facie until otherwise shown.

"Sec. 7. If any section, subdivision, paragraph, sentence, clause or word of this act be held to be unconstitutional, the remaining portions of same shall nevertheless be valid; and it is declared that such remaining portions would have been included in this act though the unconstitutional portions had been omitted.

"Sec. 8. This act shall be cumulative of all laws of the State of Texas not inconsistent herewith and not hereby expressly repealed or amended.

"Sec. 9. Section 9, Chapter 26, of the Acts of the Forty-second Legislature, first called session, and also Section 11-J, Chapter 28, of the Acts of the Forty-second Legislature, first called session, and all other laws and parts of laws in conflict herewith are hereby repealed.

"Sec. 10. Emergency clause."

Prominent Executives Visit Mid-Continent Points

Left to right: W. E. Meub, vice president, Youngstown Sheet & Tube Co.; W. J. Morris, president, the Continental Supply Co.; Frank Purnell, president, Youngstown Sheet & Tube Co., and H. G. Dalton, chairman of board, Youngstown Sheet & Tube Co.

High officials of the Continental Supply Co. and of the Youngstown Sheet & Tube Co. visited various points in the Mid-Continent area during the past week, making a survey of conditions in the oil industry as these conditions affected their business. Traveling in a special car, the executives made stops in Fort Worth, Dallas, and Houston in Texas and toured the East Texas oil fields by automobile. They then spent a day in Tulsa and another in Oklahoma City. Confidence was expressed in the outlook for the petroleum industry, it being pointed out consumption of petroleum and its products has been maintained at from 85 to 90 per cent of normal, whereas other industries had not enjoyed such a large percentage of normal business.

Late Fields

OKLAHOMA

Hilton Phillips and others' No. 1 Cook, SW cor. SE, Section 21-7-4, an extension well in the St. Louis Pool, in Pottawatomie County, began taking a potential gauge November 6, making 2,687 bbls. on that day and 2,505 bbls. the next day, from the Simpson sand at 4,155-56 feet. The log shows that the Cromwell sand was found at 3,490-3,530 feet, where a showing of 70 bbls. per day was reported. The Hunton lime was found at 3,662-3,927 feet, where another showing of oil was found.

Pringle & Marshall's No. 1, in Section 10-7-8, in the Holdenville Pool, in Hughes County, flowed 60 bbls. of oil an hour from the Booch sand at 2,884-2,917 feet, and was shut in.

Manahan Drilling Co.'s No. 1 Long, SW cor., Section 10-7-8, found the Booch sand at 2,879-2,930 feet, where it had 20,000,000 feet of gas and was spraying oil.

Sovereign Oil Co.'s No. 1 Scott, SW cor. NW NW, Section 10-7-8, made 840 bbls. of oil in 12 hours from the Booch sand at 2,900-16 feet, and is rated as a 1,700-bbl. well. Its completion will force the drilling of a number of other tests in the vicinity.

Rudman and others' No. 1 Long, SE cor. SW SW, Section 10-7-8, found the Booch sand at 2,888 feet and cored to 2,900 feet, where a showing of oil was found. The casing will be landed on top of the sand and a production test made.

KANSAS

Palmer and the Shell Petroleum Corp.'s No. 2 Winn, SE cor. NW, Section 7-20-1w, in the extreme southeast part of the Ritz-Canton Field, in McPherson County, found the Simpson sand at 3,440-44 feet, where oil rose 1,400 feet in the hole. It is the third producing sand to be discovered in the field. The others are the chat and the Viola lime.

The output of the Ritz-Canton-Decker Field was increased November 1, when the Phillips Petroleum Co. raised its nominations from 3,700 bbls. to 4,700 bbls. daily and the White Eagle Oil Corp. increased its nominations from 6,000 bbls. to 6,800 bbls. daily. The chat producers were allowed to increase their production from 7.6 per cent to 9.2 per cent of their potential and the Viola lime wells were increased from 8.2 per cent to 10.2 per cent of their potential.

The allowable production from the Voshell Pool, in McPherson County, was reduced from 60 per cent from the deep horizons to 50 per cent of the potential.

TEXAS IN U. S. SUPREME COURT

WASHINGTON, D. C., Nov. 5.—The U. S. Supreme Court will hear arguments on November 14 on whether the State of Texas has the right to use state troops to restrict the production of oil in the East Texas Field.

The U. S. Superme Court will receive submission of the Macmillan case, on Texas production, on December 5 instead of November 21.—C. E. K.

Annual Meeting of I.P.A.A. Opens in Tulsa Monday

The annual meeting of the members and directors of the Independent Petroleum Association of America is scheduled for Monday, November 14, at the Mayo Hotel, Tulsa. A one-day session is planned beginning at 10 a.m. The business of the meeting will be completed in time to allow the members who are planning to attend the American Petroleum Institute meeting at Houston to take the special train leaving at 6 o'clock Monday evening.

Committees appointed by President Wirt Franklin are at work preparing reports and recommendations for the meeting. Much attention will be given to the report of the committee on Policy and Program for the coming year. With Congress convening in December the association says a strict watch must be kept on moves to nullify the excise tax on imported crude oil and refined products.

Charles Anderson, Dallas Oil Man, Is Taken by Death

Charles F. Anderson, independent oil operator, died unexpectedly in his home in Dallas, Tex., Wednesday, November 2. He had been in his office until noon two days before his death. Born in Pittsburgh, Pa., Mr. Anderson at an early age became associated with his father, Frank H. Anderson in the coal business in western Pennsylvania, operating on the Monongahela River.

After his father's death Charles Anderson operated independently in the oil fields of western Pennsylvania, Ohio and West Virginia. Later he became associated with the Benedum-Trees Oil Co. and in 1917 he located in Shreveport, La., where he had charge of the lease and land department of the Arkansas Natural Gas Co., controlled by J. G. Trees and M. L. Benedum.

In 1918 Mr. Anderson was transferred to Dallas by Benedum & Trees and was placed at the head of the lease and land department of the Arkansas Natural Gas Co., in charge of the company's interests throughout Arkansas, Louisiana, Oklahoma, Texas and New Mexico. A few years ago he again entered the independent field, but he continued to be closely associated with his former employers.

Mr. Anderson leaves his wife, Mrs. Mary V. Anderson, a son, Fuller Anderson; one daughter, Mrs. H. P. Inge, and one brother, George Anderson, all residing in Dallas.

TANK WAGON CHANGES

(Continued from Page 26)

October 21, reduced gasoline tank wagon price .5 cent to 15.5 cents and service station 1 cent to 17 cents at Bartlesville, Okla.; effective November 1, company advanced furnace oil quotations one-half cent in Chicago.

Standard Oil Co. of Louisiana effective October 29 advanced gasoline tank wagon and service station prices throughout territory; same date company advanced kerosene tank wagon price 1 cent in Louisiana and Arkansas.

Continental Oil Co. effective October 28 advanced gasoline tank wagon and service station prices 1 cent in Albuquerque, N. Mex.

Standard Oil Co. of New Jersey effective November 4 reduced gasoline service station price 1 cent at Roanoke, Va.

Standard Oil Co. of New York effective October 21 advanced gasoline tank wagon and service station prices 1 cent throughout territory.

OSAGES WIN OIL SUIT

WASHINGTON, D. C., Nov. 7.—Osage Indians won a Supreme Court victory today in their fight to retain benefits from rich oil and gas deposits beneath their original allotted lands. The court refused to review an effort by Henry R. Adams and others, owners of land in Osage County, to set aside a Circuit Court of Appeals decision that in purchasing the land they did not obtain title to the oil, gas and other minerals.

Operations in East Texas Continue Unchanged; Many Wells Undergoing Standardization

By L. E. BREDBERG

DALLAS, Tex., Nov. 7.—The staking of 103 more locations during the week does not reflect any change in the status in East Texas. Ninety-five wells were completed. Two refineries are now under construction in the district, another will be constructed a short distance outside of the field, and two gasoline plants are being completed, one of them now processing casinghead gas from wells in the Joiner area, but being enlarged to handle more gas.

More wells are undergoing standardization, the majority of them of necessity, located on the west and eastern edges of the field, although some few companies, principally the Magnolia Petroleum Co. and Superior Oil Co. of California have equipped the majority of their wells with pumping equipment. The latter company is now completing the standardizing of 28 wells on its leases in the Willow Springs district, Gregg County, preparing them for the future when pressures might decrease to the pumping point during the winter or rainy season when standardization work would be a costly but necessary job. Concrete bases have been placed for many of the pumping units, especially in the lower areas where flood waters penetrate, and where such water stands around the wells indefinitely. Steel substructures are also used on some wells in such areas.

All kinds of pumping units are being installed, from small gas engine units with old wood walking beams and jackposts and second-hand pumping equipment, including rods and tubing, to the latest equipment manufactured, such as the bottom hole centrifugal pump now being tried on a Kilgore lease, and central power units such as in operation in the Joiner area, Rusk County. One company has four such central power units in operation in that area, is now building a fifth and will build still another on its leases which are located in the low pressure area.

The method of prorating the field may not be changed if the State legislature passes a bill which legalizes proration according to market demand, but due to the three judge Federal court decision, changing the present method of per well basis was imperative. If a change in the method is adopted it probably will be on a bottom hole pressure method, which E. O. Buck, petroleum engineer for the Texas Railroad Commission, recommends.

Many are asking what will happen if the wells are cut to as low as 30 bbls. per day. Petroleum engineers in the field do not hesitate to say that the majority of the wells will have to be put on the pump if this happens, paraffin proving a great handicap to producing the wells under such a small allowable and requiring pumping to keep them cleaned and able to produce. Tapered tubing of smaller size has given considerable trouble in the field, even to the point of causing discontinuance by some of the companies which will not run tubing less than 1¼ and 1½ inches in the future. Choking the wells to less than the present allowable of 40 bbls. is expected to give similar paraffining troubles.

Several arrests have been made by military authorities and state Rangers, and many more men have been interrogated in regard to the explosion which wrecked connections on Shell Petroleum Corp.'s No. 3 Landers, northeast of Gladewater in Upshur County. The well caught fire following the explosion, but fresh water was pumped in to kill the flow of oil, and chemicals extinguished the blaze within 24 hours, after which new connections were substituted. This was the second well in this immediate area to be wrecked by explosives within three months, Humble Oil & Refining Co.'s No. 3 Mary Killingsworth having been partially wrecked in August, but luckily not catching fire.

Sabine River Bed

While the crew was lowering the crown block on one of the Sabine River beds, shortly after it was drilled in, the block fell striking and breaking connections. A fire was immediately started by the accident, killing one man and endangering others around the well, but it was soon extinguished. A wild well afire in such a location would have been doubly hard to bring under control, and would no doubt have brought hundreds of damage suits to the owners, mainly because of pollution caused by the wild flowing oil falling into the river.

The Sabine River bed in Gregg County is one of the most active, if not the most active area in the field at present, with owners of leases in the river bed drilling on various tracts, and offsets on both sides of the river also going down. Concrete pilings are used on some of the river bed wells, while on others large timbers are used for pilings. Caissons are set before drilling is started, and the casing is further protected and reinforced by a special arrangement of old sucker rods placed alongside and parallel with the casing. After some of the wells are completed a triangular block of concrete is poured around the pipe which extends above the river bed. The apex is set upstream to ward off trees, logs and other debris which may be washed down the river during the high water, to prevent the pipe and connections from being damaged and letting the wells flow wild and pollute the stream.

It was learned today that the three-judge Federal court which rendered decision in the case of Constantin-Wrather and others versus the Texas Railroad Commission, against the commission, would postpone entering a decree until the legislature has adjourned. Postponement will prevent wells from being opened until possibly another law can be enacted.

Interesting Test

An interesting test in the southwest corner of the field, southern Rusk County, is to be drilled by the Stanolind Oil & Gas Co. on its 107.6-acre J. W. Ashby lease in the Milton Walker Survey. The test on which a rig is now up is approximately 1 mile north of the Sinclair Prairie Oil Co.'s gas well on the Ashby farm in the William Clarke Survey. The Stanolind test may mark the line of demarkation between the oil and gas producing areas on the southwest edge of the field.

Columbia Oil & Gas Co.'s No. 1 Castleberry, in the D. Sanches Survey, on the east side of the Lathrop area, Gregg County, formerly completed as a dry hole, has been worked over and completed for an initial production of 71 bbls. in 11 hours, pumping. Total depth is 3,672 feet.

George Glover abandoned his No. 1 Clark Dickson in the S. Baggett Survey at a total depth of 3,567 feet. It is in the extreme northeastern part of the Gregg County area. Humphrey's No. 1 Branson, in the D. Meredith Survey, in the same area, is now swabbing, showing a small amount of gas and oil. Total depth is 3,638 feet. Six and five-eighths inch casing was set at 3,575 feet. Some sand was drilled from 3,627-32 feet, having a small showing of gas and oil.

Landers and others have abandoned their No. 1 Rufus Smith at a total depth of 3,657 feet. This test was plugged back to 3,615 feet in an effort to make a producer before plugging orders were given. It is located in the T. V. Allen Survey in North Gregg County.

There are now approximately 425 operations in the field in various stages, from rigging up to those standing while waiting for cement to set on the last string of casing which is run before the wells are drilled in and completed. The Humble Oil & Refining Co. and Mid-Kansas Oil & Gas Co. are the two most active companies, drilling to bring down their well per acreage basis to that of the average in the field which is one well to slightly over 13.0 acres.

Wildcatting Activities

A test drilling near the town of Brownsboro in Henderson County caused considerable flurry this week when it was reported that a 30-inch core of highly saturated sand had been taken from between 3,667-69 feet, with top of the sand claimed to have been logged at 3,661 feet. According to other tests drilled in this area, this last test should log the Woodbine sand around 4,500 feet, making present reports seem considerable out of line with known conditions. Companies are watching the test, but are not doing any buying, although a few independents became active as a result of the reports.

Meyers, Bateman and others are drilling the test on the Olsen farm in the George Wilson Survey. The owners traded for some casing for the well, which will be set before a test is made, or it is deepened.

Tucker and Van Fleck of Ardmore, Okla., are moving in material for a test to be drilled in the S. J. Maughan 564-acre tract in the J. J. Hooper Survey, approximately 2½ miles east of Gilmer in Upshur County. They have approximately 1,500 acres surrounding the location.

J. P. Evans' No. 1 Bell in the William McFadden Survey, near Kelsey in Upshur County, is plugging at 3,946 feet. It topped the Woodbine sand at 3,525 feet, logging the base at 3,842 feet. The sand was dry.

Magnolia Petroleum Co. is leasing a block in the eastern part of Franklin County, north of the town of Mount Vernon, having already leased approximately 4,700 acres, and still purchasing more. The block leased covers an area extending from the D. Moore and J. H. Thomas Surveys in the central part of the county east to the Titus County line.

L. G. Priest is moving derrick material to his R. W. Peck lease located in the A. Wagley Survey, 7 miles southwest of Avery in Red River County, and will drill a Woodbine sand test. A 10,000-acre block has been assembled in this area by T. E. Lawson of Anona.

Killum & Chisum have a rig up on their N. E. Clark lease in the Jackson Thomas Survey, 2 miles south of the town of Van in Van Zandt County, and will drill a Woodbine sand test.

Mr. Barkley and associates of Wichita Falls have completed a 3,000-acre block south of the Boggy Creek Pool in Anderson County, and will drill a 1,600-foot test as a result of core drill tests in this area. A location has been made in the James Scaggs Survey. The block covers the James Scaggs, east half of Alexander Brown and D. Roberts Survey.

Reiter, Blanchard and Porter are assembling approximately 8,000 acres around the town of Dew, 9 miles south of Fairfield in the Davant, J. Copeland, T. B. Bozeman and J. M. Hallmark Surveys.

Shell Petroleum Corp. and Penn Oil Co.'s No. 1 Phillips on their Centreville block, in the Swayze Survey, Leon County, are drilling below 5,750 feet.

COMPLETIONS IN EAST TEXAS

North Gregg County

Atlantic Oil Production Co.'s No. 8 McBee Fisher, top sand 3,463 feet, initial production 64 bbls. per hour through 1½-inch and 1¼-inch tubing, total depth 3,495 feet. Columbia Oil & Gas Co.'s No. 1 G. A. Castleberry. This well formerly completed as dry hole, later gone into and made a small pumper of an initial production of 71 bbls. in 11 hours, total depth 3,672 feet, D. Sanches Survey. Drilling Exploration Co.'s No. 1 Hammon, top sand 3,518 feet, initial production 25 bbls. in 15 minutes through 1-inch tubing choke, total depth 3,535 feet. Gulf Production Co.'s No. 11 A. V. Bacle, top sand 3,584 feet, initial production 80 bbls. per hour through three-quarters inch tubing choke, total depth 3,606 feet. Howe's No. 32-B Judge, top sand 3,495 feet, initial production 64 bbls. per hour through tapered tubing, total depth 3,526 feet. Humble Oil & Refining Co.'s No. 8 A. L. Hughes, top sand 3,583 feet, initial production 77 bbls. per hour through three-quarters inch tubing choke, total depth 3,630 feet; No. 9 H. M. Lawrence, top sand 3,612 feet, initial production 77 bbls. per hour through three-quarters inch tubing choke, total depth 3,652 feet; No. 4-A J. H. Sheppard, top sand 3,636 feet, initial production 15 bbls. in 15 minutes through three-quarters inch tubing choke, total depth 3,665 feet. Landers and others' No. 1 Rufus Smith, top Georgetown lime 3,645 feet, total depth 3,657 feet, plugged back to 3,615 feet, dry and abandoned, T. V. Allen Survey. Lester and Duffield's No. 2 J. Moore, top sand 3,550 feet, initial production 30 bbls. in 15 minutes through open 2-inch tubing, total depth 3,580 feet. Magnolia Petroleum Co.'s No. 6 H. Key, top sand 3,534 feet, initial production 176 bbls. per hour through open 2½-inch tubing, total depth 3,543 feet; No. 5 I. Zeigler, top sand 3,462 feet, initial production 165 bbls. per hour through open 2½-inch tubing, total depth 3,476 feet.

Prince Brothers and Massie's No. 6 Orr, top sand 3,594 feet, initial production 40 bbls. in 15 minutes through three-quarters inch tubing choke, total depth 3,629 feet. Selby Oil & Gas Co.'s No. 14-B Snavely heirs, top sand 3,555 feet, initial production 23 bbls. in 15 minutes through open 2-inch tubing, total depth 3,570 feet. Shell Petroleum Corp.'s No. 7 Hampton, top sand 3,642 feet, initial production 75 bbls. in 30 minutes through open tapered tubing, total depth 3,706 feet; No. 7 Stinchcomb, top sand 3,419 feet, initial production 35 bbls. in 30 minutes through open tapered tubing, total depth 3,468 feet. Sinclair Prairie Oil Co.'s No. 6-B J. W. Akin, top sand 3,541 feet, initial production 35 bbls. in 15 minutes through 2½-inch tubing, total depth 3,575 feet. Sun Oil Co.'s No. 4 Reppond, top sand 3,656 feet, initial production 39 bbls. per hour through open tapered tubing, total depth 3,685 feet; No. 8 M. C. Satterwhite, top sand 3,565 feet, initial production 34 bbls. per hour through open tapered tub-

ing, total depth 3,646 feet. The Texas Company's No. 9 T. W. Lee, top sand 3,540 feet, initial production 90 bbls. per hour through 1-inch tubing choke, total depth 3,567 feet. Tidal Oil Co.'s No. 15 Castleberry, top sand 3,584 feet, initial production 22½ bbls. per hour through open 2-inch tubing, total depth 3,605 feet; No. 21 Lake Devernia, top sand 3,502 feet, initial production 20 bbls. in 10 minutes through 2-inch open tubing, total depth 3,541 feet. Yount-Lee Oil Co.'s No. 2-B T. W. Lee, top sand 3,557 feet, initial production 47 bbls. per hour through eleven-sixteenths inch tubing choke, total depth 3,573 feet.

South Gregg County

Jack Berry's No. 2 G. Davis, top sand 3,650 feet, initial production 37 bbls. in 15 minutes through 1¼-inch tubing choke, total depth 3,654 feet. Blue Star Oil Co.'s No. 3-J Sabine River (tract No. 3), top sand 3,539 feet, initial production 70 bbls. per hour through three-quarters inch tubing choke, total depth 3,550 feet; No. 6-I Sabine River (tract No. 6), top sand 3,512 feet, initial production 75 bbls. per hour through three-quarters inch tubing choke, total depth 3,532 feet; No. 6-J Sabine River (tract No. 6), top sand 3,510 feet, initial production 75 bbls. per hour through three-quarters inch tubing choke, total depth 3,535 feet; No. 7-E Sabine River, top sand 3,483 feet, initial production 80 bbls. per hour through three-quarters inch tubing choke, total depth 3,503 feet. Champlin and Bass' No. 5 Watson, top sand 3,569 feet, initial production 45 bbls. per hour through three-quarters inch tubing choke, total depth 3,605 feet. W. H. Dixon and others' No. 1 Clayborne, top sand 3,712 feet, initial production 105 bbls. per hour through open tubing, total depth 3,714 feet. George Glover and others' No. 1 Dickson, dry and abandoned, total depth 3,567 feet, top Pecan Gap 2,440 feet, base 2,940 feet, top Austin chalk 3,480 feet, base 3,532 feet, S. Baggett Survey.

Gulf Production Co.'s No. 6 M. B. Hughey, top sand 3,510 feet, initial production 82 bbls. per hour through three-quarters inch tubing choke, total depth 3,534 feet; No. 19 A. Spear, top sand 3,561 feet, initial production 72 bbls. per hour through three-quarters inch tubing choke, total depth 3,572 feet. Island Oil Co.'s No. 3 Register, top sand 3,635 feet, initial production 75 bbls. per hour through three-quarters inch tubing choke, total depth 3,647 feet. Koberg Oil Co.'s No. 3 L. Martin, top sand 3,680 feet, initial production 31 bbls. in one-half hour through three-quarters inch tubing choke, total depth 3,682 feet. T. W. Lee's No. 1 School Lot, top sand 3,722 feet, initial production 75 bbls. per hour through open tubing, total depth 3,727 feet.

Magnolia Petroleum Co.'s No. 3 Andrews, top sand 3,618 feet, initial production 168 bbls. per hour through open tubing, total depth 3,727 feet; No. 3 M. T. Cole, top sand 3,539 feet, initial production 84 bbls. per hour through 1-inch tubing choke, total depth 3,540 feet; No. 6 N. Radford, top sand 3,593 feet, initial production 180 bbls. per hour through open tubing, total depth 3,608 feet. Mead Oil Co.'s No. 4 I.&G.N.R.R., top sand 3,550 feet, initial production 32 bbls. in one-half hour through open tubing, total depth 3,580 feet. Pelican Natural Gas Co.'s No. 7 A. Spear, top sand 3,650 feet, initial production 80 bbls. per hour through 1¼-inch tubing, total depth 3,659 feet. Rhoads Drilling Co.'s No. 1 Sabine River, top sand 3,540 feet, initial production 30 bbls. in one-half hour through 1-inch tubing choke, total depth 3,651 feet (Tract No. 4). Ruston Drilling Co.'s No. 1 Sabine River, top sand 3,541 feet, initial production 129 bbls. per hour through 1-inch tubing choke, total depth 3,553 feet (Tract No. 3).

Shell Petroleum Corp.'s No. 5-B Bivens, top sand 3,643 feet, initial production 21 bbls. in one-half hour through tapered tubing, total depth 3,659 feet; No. 4-A J. S. Elder, top sand 3,550 feet, initial production 22 bbls. in one-half hour through tapered tubing, total depth 3,617 feet. Sinclair Prairie Oil Co.'s No. 11 J. E. Lawther, top sand 3,533 feet, initial production 35 bbls. per hour through open tubing, total depth 3,560 feet. Sun Oil Co.'s No. 5 William Penticost, top sand 3,605 feet, initial production 81 bbls. per hour through open tubing, total depth 3,656 feet. Tidal Oil Co.'s No. 15 Bivens, top sand 3,608 feet, initial production 21 bbls. in 10 minutes through open tubing, total depth 3,624 feet.

North Rusk County

Gulf Production Co.'s No. 1 Wittle Oten, top sand 3,632 feet, initial production 50 bbls. per hour through three-quarters inch tubing choke, total depth 3,732 feet. Humble Oil & Refining Co.'s No. 25 L. D. Crim, top sand 3,608 feet, initial production 106 bbls. per hour through three-quarters inch tubing choke, total depth 3,624 feet; No. 20-B S. S. Laird, top sand 3,538 feet, initial production 35 bbls. per hour through three-quarters inch tubing choke, total depth 3,625 feet; No. 5 M. E. Minor, top sand 3,684 feet, initial production 72 bbls. per hour through three-quarters inch tubing choke, total depth 3,689 feet; No. 3 J. N. Peterson, top sand 3,610 feet, initial production 35 bbls. per hour through three-quarters inch tubing choke, total depth 3,654 feet; No. 10-B H. Sexton, top sand 3,610 feet, initial production 68 bbls. per hour through three-quarters inch tubing choke, total depth 3,698 feet. Tidal Oil Co.'s No. 10-A J. S. Bean, top sand 3,651 feet, initial production 60 bbls. per hour through open tubing, total depth 3,578 feet. Wheelock and Collins' No. 11 D. Wells, top sand 3,644 feet, initial production 42 bbls. in one-half hour through one-half inch tubing choke, total depth 3,667 feet. Fox Wood and others' No. 2 L. Morris, top sand 3,651 feet, initial production 69 bbls. in one-half hour through open tubing, total depth 3,690 feet.

South Rusk County

Ajo Oil Corp.'s No. 1-B Joe Lee, top sand 3,781 feet, initial production 40 bbls. in one-half hour through 1-inch tubing choke, total depth 3,793 feet. American Liberty Oil Co.'s No. 15 Ida L. Kinney, top sand 3,570 feet, initial production 50 bbls. per hour through open 2½-inch tubing, total depth 3,630 feet; No. 6-A Pinkston, top sand 3,674 feet, initial production 100 bbls. per hour through open 2½-inch tubing, total depth 3,700 feet. Belrice Oil Co.'s No. 3 Calvin Young, top sand 3,666 feet, initial production 100 bbls. per hour through 2-inch tubing choke, total depth 3,703 feet. Combined Oil Co.'s No. 12 G. W. Eaton, top sand 3,780 feet, initial production 48 bbls. in one-half hour through 2-inch open tubing, total depth 3,790 feet. Culp and others' No. 1 M. Clay, top sand 3,596 feet, initial production 35 bbls. per hour through open 2-inch tubing, total depth 3,698 feet.

David Donoghue, receiver's No. 2-B A. Johnson, top sand 3,789 feet, initial production 100 bbls. per hour through 1½-inch tubing choke, total depth 3,796 feet. J. Ray Gaskey's No. 1 J. R. Alford, top sand 3,585 feet, initial production 35 bbls. in one-half hour through 2½-inch open tubing, total depth 3,735 feet.

Humble Oil & Refining Co.'s No. 9 J. R. Irion, top sand 3,450 feet, initial production 64 bbls. per hour through three-quarter inch tubing choke, total depth 3,730 feet; No. 5 Sol Dennis, top sand 3,667 feet, initial production 23 bbls. per hour through three-quarter inch tubing choke, total depth 3,750 feet; No. 9 Gueria, top sand 3,667 feet, initial production 108 bbls. per hour through three-quarter inch tubing choke, total depth 3,713 feet; No. 7-B Kangerga, top sand 3,608 feet, initial production 21 bbls. in one-half hour through three-quarter inch tubing, total depth 3,632 feet; No. 19 W. L. Price, top sand 3,704 feet, initial production 112 bbls. per hour through three-quarter inch tubing choke, total depth 3,756 feet; No. 12-A R. E. L. Silvey, top sand 3,647 feet, initial production 72 bbls. per hour through three-quarter inch tubing choke, total depth 3,734 feet; No. 2 Amanda Simmon, top sand 3,758 feet, initial production 72 bbls. per hour through three-quarter inch tubing choke, total depth 3,804 feet; No. 4 F. F. Wooster, top sand 3,740 feet, initial production 36 bbls. per hour through three-quarter inch tubing choke, total depth 3,729 feet. Hunt Production Co.'s No. 5-D Bradford, top sand 3,588 feet, initial production 8 bbls. per hour pumping, total depth 3,630 feet; No. 4 R. J. Vinson, top sand 3,616 feet, initial production 12 bbls. per hour pumping, total depth 3,733 feet.

Magnolia Petroleum Co.'s No. 6 G. W. Eaton, top sand 3,760 feet, initial production 40 bbls. in five minutes through 3-inch flow line on casing, total depth 3,769 feet. Mid-Kansas Oil & Gas Co.'s No. 45 M. M. Cross, top sand 3,617 feet, initial production 72 bbls. per hour on 2-inch lead, total depth 3,646 feet; No. 7 R. G. Mason, top sand 3,586 feet, initial production 48 bbls. per hour on 2-inch lead, total depth 3,696 feet. Corbin & McGaughy's No. 1 E. B. Alford, top sand 3,604 feet, initial production 33 bbls. per hour through open 2-inch tubing by heads, total depth 3,659 feet. Kimble & Acre's No. 4 E. B. Alford, top sand 3,587 feet, initial production 20 bbls. in 40 minutes through open 2-inch tubing by heads, total depth 3,665 feet. Rogers Brothers' No. 1 M. A. Thrash, top sand 3,720 feet, initial production 23 bbls. in one-quarter hour through three-quarter inch tubing, total depth 3,767 feet. The Texas Company's No. 10 Kersh, top sand 3,624 feet, initial production 110 bbls. per hour through open 2-inch tubing, total depth 3,627 feet. Tidal Oil Co.'s No. 5 Joel Shaw, top sand 3,645 feet, initial production 25 bbls. in one-quarter hour through open 2-inch tubing, total depth 3,717 feet. Grady Vaughan's No. 5 Alford, top sand 3,735 feet, initial production 100 bbls. per hour through open 2-inch tubing, total depth 3,737 feet.

Smith County

K.O.T. Oil Co.'s No. 2 S. S. Cooke, top sand 3,711 feet, initial production 48 bbls. in 45 minutes through open 2-inch tubing, total depth 3,721 feet. Sun Oil Co.'s No. 12 O. W. Knight, top sand 3,622 feet, initial production 42 bbls. per hour through open 2½-inch tubing, total depth 3,647 feet.

Upshur County

Conservative Oil Co.'s No. 8 Victory, top sand 3,661 feet, initial production 105 bbls. per hour through open 2-inch tubing, total depth 3,688 feet. Humble Oil & Refining Co.'s No. 8 G. W. Johnson, top sand 3,685 feet, initial production 78 bbls. per hour through three-quarter inch tubing choke, total depth 3,712 feet; No. 5 A. J. Watkins, top sand 3,650 feet, initial production 78 bbls. per hour through three-quarter inch tubing choke, total depth 3,667 feet. Magnolia Petroleum Co.'s No. 6 N. W. Blackwell, top sand 3,678 feet, initial production 84 bbls. per hour through 1-inch tubing choke, total depth 3,683 feet. Stanolind and Simms Oil Co.'s No. 9-C J. J. Flewellen, top sand 3,733 feet, initial production 40 bbls. per hour through 1-inch tubing choke, total depth 3,738 feet. Sun Oil Co.'s No. 9 Hargraves, top sand 3,726 feet, initial production 21 bbls. per hour through open tapered tubing, total depth 3,732 feet. Stroube & Stroube's No. 1 R. J. Mackey, top sand 3,575 feet, initial production 60 bbls. per hour through open 3-inch casing and 1¼-inch tubing on 2-inch lead, total depth 3,590 feet. The Texas Company's No. 2 J. Williams, top sand 3,694 feet, initial production 202 bbls. per day through open 2-inch tubing by heads, total depth 3,701 feet.

Van Pool—Van Zandt County

Pure Oil Co.'s No. 4 A. E. Humphreys, initial production 66 bbls. first 24-hour gauge after proration test, total depth 2,946 feet; No. 4 H. P. Tunnell, initial production 41 bbls. first 24-hour gauge after proration test, total depth 2,941 feet.

East Central Texas Wildcats

Week Ending November 7

ANDERSON COUNTY

Company, well, farm name, section and block—	Remarks:
W. H. Rosier's No. 1 W. H. Henke, 45,115 varas S and 294 varas W of NE cor. of Blk. No. 12, Anderson County School Lands Sur.	Drlg. 150 ft.
C. R. Wilmuth et al's No. 1 N. B. Watson, 500 ft. from W line and 4,850 ft. from N of S line of survey in S½ of 129-ac. tract, M. Main Sur.	T.D. 1,538 ft.

ANGELINA COUNTY

Crosbie et al's No. 1 John C. Davis, 150 ft. from N of center of tract and survey, John H. Graham Sur.	Drlg. 310 ft.
W. J. Chandler's No. 1 L. J. Dearman, 350 ft. from S and W lines of 20-ac. tract, J. T. Peavy Sur.	Drlg. 960 ft.

BOWIE COUNTY

Roy Anderson's No. 1 Dykes, 2 miles W of Texarkana, M. Dykes Sur.	S.D.; T.D. 2,810 ft.
Tom Bell et al's No. 1 C. M. Moss, 1,800 ft. from N line and 2,160 ft. from W line of 465-ac. tract and survey, O. D. Walton Sur.	Derrick.

CHEROKEE COUNTY

Barkley Tate et al's No. 1 H. E. Neal, 330 ft. from N and W lines of tract, J. M. Prosella Sur.	Derrick.
Bridges and Candler's No. 1 Berryman, center of Berryman tract, H. Kimble Sur.	S.D. 1,550 ft.
Davis et al's No. 2 Annie Kelly, 631 ft. W of No. 1, M. De Los Santos Coy Sur.	Derrick.
Hooper et al's No. 1 Doctor Overton, 330 ft. from N and E lines of tract and 330 ft. out of most easterly NE cor. of survey, Wesley Dikes Sur.	Partly rigged up and S.D.
Hooper et al's No. 1 A. Pace (formerly Clopton), 288 ft. from N line and 330 ft. from most northerly E line of 40-ac. lease, Wesley Dikes Sur.	S.D. 3,665 ft.
L. J. Hopcroft et al's No. 1 J. R. Taylor, 2,600 ft. from E line and 2,000 ft. from S line of survey, G. M. Doherty Sur.	Location.
Wilson & Stubbs' No. 1 L. Robert, 450 ft. from S and 150 ft. from W line of lease, J. B. Wolfin Sur.	S.D. 3,600 ft.

DELTA COUNTY

Commerce Oil Co.'s No. 1 Ablowich, 150 ft. from S line and 776 ft. from W line of H. D. Jewett 52-ac. tract, E. Chick Sur.	S.D. 3,813 ft.
Joiner et al's No. 1 Blackwell, 800 ft. S and 150 ft. from E lines of 275-ac. tract, Dunnetelle Sur.	S.D. 3,310 ft.

ELLIS COUNTY

Armstrong's No. 1 Milton Cook, SE cor. of 50-ac. tract, S. Frederick Sur.	S.D. 375 ft. (corrected).
Armstrong Bros.' No. 1 Reeves	S.D. 300 ft.
Armstrong Bros.' No. 1 John Lee Winn, 1,650 ft. from E and 150 ft. from S of Orland, Orlo Wheeler Sur.	S.D. 1,435 ft.
Clark Brooks' No. 1 Anderson, SE cor. of 3,900-ac. tract, 10 miles SW of Waxachachie, E. C. Branch Sur.	S.D. 1,050 ft.
Paris Oil Co.'s No. 1 O. S. Bain, 1,500 ft. from S line and 300 ft. from W line of 60-ac. lease, R. M. Williams Sur.	S.D. 985 ft.

FRANKLIN COUNTY

Tom Harper's No. 1 fee, 150 ft. from N line and 300 ft. from E line of 116-ac. tr., W. M. Dawson Sur.	Reaming to set liner; T.D. 3,330 ft.

FREESTONE COUNTY

Clyde Creighton's No. 1 Holley Bros., 854 ft. from W line and center of N and S lines of lease, A.B.M. Sur.	S.D. 3,669 ft.

(Continued on Page 37)

PIPE LINE CONTRACT

HOUSTON, Tex., Nov. 7.—Apex Construction Co. of Tulsa and Houston has been awarded the contract by the Texas Pipe Line Co. for the laying of three new 8-inch lines across the Trinity River in Liberty County. This is replacement construction on the Texas Pipe Line Co.'s main system from Humble to Port Arthur. The company has eight lines crossing the Trinity River at this point.

Ector Test May Mean an Important Extension; Hearing on Winkler County Proration Held

By L. E. BREDBERG
Fort Worth Bureau, The Oil and Gas Journal

FORT WORTH, Tex., Nov. 7.—Landreth Production Co.'s No. 1 O. B. Holt location on which a rig is now being erected is in an interesting area of Ector County, and consequently will be one of the most important tests in the Permian Basin due to the fact that it is approximately 3 miles northwest of two Stanolind Oil & Gas Co. producers on the Cowden ranch, and may mean the extension of production in that area, proving a field of considerable importance. The location was staked in the SW cor. SE, Section 15, Block 43, Township 1n, T.&P. Survey. Both of the Stanolind producers are shut in, due to lack of pipe line connections, and because the company does not desire to produce its block at this time.

Ector County has had several interesting tests drilling during the past three months, one of them, Broderick and Calvert's No. 1 Parker having been abandoned last week. Another interesting test in the county is L. C. Harrison and others' No. 1 Addis in Section 35, Block 43, Township 2s, T.&P. Survey. It is having tough luck drilling up a bailer which was recently dropped in the hole. Total depth is 3,690 feet.

Ward County

Weekly Oil Corp. and Hults' No. 1 Burks in Section 26, Block B-29, which has promised an extension to the southern Ward County area, struck a hole full of sulphur water from 2,607-18 feet and is now plugging back to complete as a gasser. First gas was logged at 2,147 feet and an increase was registered at 2,165-70 feet, where it made an estimated 8,000,000 to 10,000,000 feet per day. The nearest producer is Stanolind Oil & Gas Co.'s No. 1 Brown, three-quarters of a mile to the west. It struck sulphur water at 2,762 feet and was plugged back.

Reagan County

Big Lake Oil Co.'s No. 1-C University is now the deepest drilled test in the Big Lake Field, Reagan County. It is drilling past 9,115 feet, drilling 97 feet during the week. Deepening of this well was started last week with intentions of carrying it to 11,000 or 12,000 feet.

Proration Hearings

November 2 hearings on proration of the Crane-Upton areas and the Winkler County Field were heard at Fort Worth by the Railroad Commission. L. E. Barrows, district manager for The Texas Company, acted as spokesman for the operators in the former pools, stating that the allowable had been cut the middle of October to 7,700 bbls. daily, while a minimum of 13,000 bbls. per day is needed for the owners of the large number of water producing wells to continue to pump those wells.

A recheck of potentials in the field was requested, Mr. Barrows stating that the present named potential of 56,464 bbls. daily is greatly in error. Not more than 257 of the 585 wells are capable of producing more than their marginal quota of 20 bbls., according to facts brought out in the hearing.

Recommendations were made that the field be divided into two parts, separating the Church and Fields and the McCamey areas. After this is done the unused allowable on a potential basis should be divided between the two areas, after all marginal wells are given consideration.

The McElroy Ranch Co., which enjoined the Railroad Commission from enforcing its recent curtailment order from 5,600 to 5,000 bbls. per day, asked that the Gulf-McElroy area be allowed its previous daily allowable of 5,600 bbls. There are 25 wells on this ranch property, and testimony was given by the Gulf Production Co., owner of leases on 25 sections of the ranch, that it has observed the lowest gas-oil ratio possible in producing these 25 wells, and that no water has shown up in the wells. There are 1,500 undrilled locations on acreage considered proved to production. The first well was brought in on the ranch in 1926.

Winkler County

Winkler County was ordered curtailed 10,000 bbls. per day on October 15 by the Railroad Commission, and at the hearing held this week it was recommended that instead of lopping off that amount per day in the county, only 7,500 bbls. be cut from the daily average. Up to October 15 the county was allowed 35,000 bbls. daily, but was producing only 29,900 bbls. daily with practically all of the 485 wells producing at capacity.

Officials of the Stanolind Oil & Gas Co., which is the largest producer in the field, asked that the allowable be placed at 27,500 bbls. effective November 1 with a 500-bbl. per day reduction each month until April 1 when the production would be around 25,000 bbls., according to its natural decline in production. The potential of 90,000 bbls. per day, as a basis of proration, was also stated to be far out of reason with what the field can really produce.

Gulf Production Co.'s witness stated that the field could not make more than 28,000 bbls. daily, and approved Stanolind Oil & Gas Co.'s recommendation of 27,500 bbls., with the exception of a 500-bbl. reduction each month. He stated that the field should be allowed to produce at the best rate to prevent waste.

Wells which are pinched back or closed in hardly ever again produce as much as before pinching or closing in, according to testimony at the meeting. Under the present order many wells in the field have an allowable which they cannot make while others are cut below what they can produce. All agreed that the potential-unit basis should be discontinued and that a straight potential basis should be adopted, based on actual production of the field in September, 1932.

Sid Richardson, producer in the Scarborough area, northern Winkler County, recommended that that area be not prorated until it is further developed, that proration be not applied to that pool until later, and that this area be not included in the Winkler County area as heretofore. The area is free from water encroachment. Little development has been done in the area since its discovery.

It was recommended that the O'Brien-Hutchings area be allowed to produce according to its previous allocation prior to October 15. The main producer in the area brought out that if the area was thoroughly developed it would be able to produce between 50,000 and 60,000 bbls. per day, production having been carried on in an orderly manner, holding back drilling, and using the best methods to prevent waste.

Wildcat Operations in West Texas

Week Ending November 7

Company, well, farm name, section and block—	Remarks:
BORDEN COUNTY	
Westyde Investment Co.'s No. 1 Looney, 990 ft. from S and E, Sec. 15, Blk. 31, Twp. 4n. T.&P. Sur.	Drlg. 2,863 ft.
BREWSTER COUNTY	
Brewster Oil Co.'s No. 1 fee, 2,640 ft. S and 2,598 ft. E of NW cor., Sec. 45, Blk. G-15, G.C.&S.F. Sur.	S.D. 1,935 ft.
E. L. Chapman's No. 1 Skinner, C SW SE Sec. 100, Blk. 2, G.C.&S.F. Sur.	S.D. 1,302 ft.
Joiner's No. 1 McIntire, 853 ft. from S and 2,390 ft. from E, Sec. 31, Blk. 352, W. J. Mitchell Sur.	Drlg. 425 ft.
Trans-Pecos Oil & Gas Co.'s No. 1 Jones, 930 ft. from N and 2,500 ft. from E of Sec. 18, Blk. G-15, G.C.& S.F. Sur.	S.D. 2,900 ft.
Van McPhail's No. 1 McIntyre, SE cor. Sec. 59, Blk. 352, 7 miles south Alpine	S.D. 1,750 ft.
CONCHO COUNTY	
Beasley et al's No. 1 Waring Estate, 400 ft. from N and E, Sec. 163, T.&N.O. Sur.	Running 6-in. csg. 2,485 ft.
Simmons et al's No. 1 Schultz, 150 ft. from W and center N and S of E half of J. Weber Sur., Abst. 154.	S.D. 1,410 ft.
CRANE COUNTY	
Gulf Prod. Co.'s No. 10 McElroy, 1,320 ft. from S and E Sec. 196, Blk. F	Location.
CROCKETT COUNTY	
Chambers et al's No. 1 Hoover, 1,650 ft. N and 330 ft. from E, Sec. 1, Blk. FF, B.&B. Sur.	Fishing 535 ft.
Doleman & Moore's No. 1 Ferner, 2,135 ft. from N and 1,485 ft. from E of Sec. 36, Blk. 2, I.&G.N. Sur.	Spudded and S.D.
Stanolind Oil & Gas Co. et al's No. 1 Todd, 1,370 ft. from N and 1,320 ft. from E, Sec. 67, Blk. UV, G.C.&S.F. Sur.	Drlg. 6,200 ft.
The Texas Company's No. 1 H. B. Ingham, 330 ft. from S and 2,330 ft. from E line, Sec. 36½, I.&G.N. Sur.	Drlg. 2,054 ft.
J. D. Young Co.'s No. 1 Shannon, 330 ft. from N and W, Sec. 35, Blk. 1, G.C.&S.F. Sur.	S.D. 405 ft.
CULBERSON COUNTY	
Harris & Haun's No. 1 fee	Drlg. 1,715 ft.
Milton-Dorsey's No. 1 Biggs, 4,181 ft. from N and 150 ft. from E, Sec. 2, Blk. 112, P.S.L. Sur.	Location.
DAWSON COUNTY	
Albaugh et al's No. 1 Robinson, C NW Sec. 46, Blk. M, E.L.&R.R. Sur.	Shut down.
ECTOR COUNTY	
Broderick & Calvert's No. 1 Parker, 330 ft. from N and W, Sec. 15, Blk. 44, Twp. 2s, T.&P. Sur.	S.D. 4,485 ft.; to plug.
Duffey et al's No. 1 Rutledge, 990 ft. from S, 330 ft. from E, Sec. 7, Blk. B-15	Drlg. 2,246 ft.
L. C. Harrison et al's No. 1 Addis, 330 ft. from N and 1,320 ft. from W, Sec. 35, Blk. 43, Twp. 2s, T.&P. Sur.	T.D. 3,690 ft.; drlg. up bailer.
Landreth Prod. Co.'s Holt, C SW of SE Sec. 15, Blk. 43, Twp. 1n, T.&P. Sur.	Bldg. derrick.
Phillips Pet. Co.'s No. 1 Scharbauer, 990 ft. from S and 330 ft. from W, Sec. 43, Blk. 44, Twp. 2s, T.&P. Sur.	S.D. 3,751 ft.; may deepen.
Thomas et al's No. 1 Edwards, 330 ft. from S, 2,310 ft. from E, Sec. 38, Blk. 43, Twp. 3s, T.&P. Sur.	S.D. 1,950 ft.
H. F. Wurtz' No. 1 E. A. Ibbetson et al, 330 ft. from N and E lines of NW Sec. 16, Blk. 46, Twp. 3s, G. M. M.Br.&A. Sur.	S.D. 3,605 ft.
EL PASO COUNTY	
Tri-State Oil Co.'s No. 1 Bobadella, 1,325 ft. from S and E lines Sur. 254, S.F. No. 7,247	T.D. 3,190 ft.

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RANGER AND WICHITA FALLS

Thirteen of the 15 lime producing wells in the Breckenridge area, Stephens County, which have been given acid treatment in an effort to increase production, have responded to the treatment in various amounts, gas also increasing in some of the wells.

Three miles northeast of Oplin Mr. Walker and associates of Fort Worth are blocking acreage for a 4,200-foot test, the block centering around the south half of the southwest quarter of the George Hancock Survey, southwestern Callahan County.

Roeser and Pendleton have abandoned their No. A-1-112 test in Section 112, E.T.R.R. Survey in the Cook Pool, Shackelford County, at a total depth of 1,601 feet. Another test is to be drilled in this area for gas which is to be used in repressuring work in the Cook Pool.

The recently discovered Ikard Pool, 2 miles northwest of Anarene in southeast Archer County, has evidently been defined on the north by an 8-bbl. well of E. H. Sharp and others in their No. 2 Coffield. It was given two shots, one of 10 quarts and a second of 40 quarts. Sand was logged from 1,152-67 feet.

W. B. Hamilton's No. 2 Ikard in the J. J. Young Survey, same pool, was abandoned at a total depth of 2,014 feet. Canyon sand was drilled from 1,975-2,008 feet, striking water but no oil.

COMPLETIONS IN WEST TEXAS

Upton County

Hope Petroleum Co.'s No. 2 Lane, top salt 727 feet, initial production 133 bbls. pumping, top pay 2,210 feet, total depth 2,315 feet.

Ward County

Landreth Production Co.'s No. 1 Barker, top salt 980 feet, top pay 2,305 feet, shot 70 quarts 2,304-74 feet, initial production 25 bbls., total depth 2,407 feet. Thomas' No. 1 Bennett, top salt 1,420 feet, top pay 2,304 feet, initial production 196 bbls., total depth 2,545 feet.

COMPLETIONS IN PANHANDLE DISTRICT

Gray County

The Texas Company's No. 1 Faulkner (old well deepened), old total depth 2,935 feet, new total depth 2,955 feet, initial production 50 bbls. pumping, no new pay; No. 2 Faulkner (old well deepened), old total depth 2,930 feet, new total depth 2,950 feet, initial production 77 bbls. pumping, no new pay.

Moore County

Canadian River Gas Co.'s No. 2-A N. H. Reed, abandoned location.

Roberts County

Frank Travis and others' No. 1 Cunningham, temporarily abandoned.

COMPLETIONS IN NORTH TEXAS

Archer County

Burns & Long's No. 1 A. D. Thompson, dry and abandoned, total depth 1,625 feet; No. 2 Wilson, oil sand 2,214-20 feet, total depth 2,220 feet, plugged back to 2,219½ feet, initial production 124 bbls. Gross and others' No. 1 Nichols,

dry and abandoned, total depth 703 feet. Houston & Houston's No. 9 Browning, oil sand 454-61 feet, initial production 6 bbls., total depth 461 feet. Sam H. Huggins' No. 2 Porkey, oil sand 1,717-22 feet, initial production 20 bbls., total depth 1,722 feet. Ike Lyons' No. 1 P. Browning, dry and abandoned, total depth 460 feet. Pois & Schultz' No. 1 Davis, dry and abandoned, total depth 2,207 feet.

R. J. Brown's No. 9 Plemmons, oil sand 716-22 feet, initial production 10 bbls., total depth 722 feet. W. B. Hamilton's No. 2 Ikard, dry and abandoned, total depth 2,014 feet. King & Krahenbuhl's No. 1 Ray, oil sand 1,119-27½ feet, initial production 125 bbls., total depth 1,127½ feet. A. Z. Kouri's No. 3 Montgomery, oil sand 1,115-19 feet, initial production 27 bbls., total depth 1,119 feet. Morris & Dunn's No. 1 Schroeder, dry and abandoned, total depth 1,032 feet. George L. Pace's No. 6 Trun, sandy lime 1,152-70 feet, shot 80 quarts, initial production 35 bbls., total depth 1,172 feet. W. F. Powell's No. 1 Andrews, dry and abandoned, total depth 1,080 feet. Dan H. Hubsom and others' No. 1 Andrews, dry and abandoned, total depth 1,080 feet. Schultz & Weaver's No. 1 Green, sandy lime 1,142-62 feet, shot 80 quarts, initial production 35 bbls., total depth 1,162 feet. C. C. Williams' No. 1 Matlock, oil sand 639-45 feet, initial production 15 bbls., total depth 645 feet.

Baylor County

Star Drilling Co.'s No. 1 Portwood, dry and abandoned, total depth 1,405 feet.

Montague County

Bridwell Oil Co.'s No. 2 Gist, oil sand 1,223-39 feet, initial production 110 bbls., total depth 1,239 feet; No. 3 Tucker, show oil 1,227-36 feet, initial production 125 bbls., total depth 1,248 feet. Crenshaw and others' No. 1 Jones, dry and abandoned, total depth 927 feet.

Jack County

Alexander & Wallace's No. 1 Mullins, dry and abandoned, total depth 753 feet. Fred A. Bond's No. 1 N. F. Rudolph, dry and abandoned, total depth 755 feet. McKee Drilling Co.'s No. 1 Hunt, dry and abandoned, total depth 612 feet. W. W. Silk and others' No. 1 Bowen, dry and abandoned, total depth 803 feet. Murback & Holmberg's No. 1 M. J. Gardner, dry and abandoned, total depth 2,732 feet. Rathke Oil Co.'s No. 1 Shaw & Rathke, dry and abandoned, total depth 805 feet. J. L. Swanner's No. 7 Parker, dry and abandoned, total depth 1,312 feet. F. C. Baldwin's No. 7 Dobie, dry and abandoned, total depth 1,051 feet. R. R. Clark's No. 26 Bickley, dry and abandoned, total depth 953 feet; No. 27 Bickley, dry and abandoned, total depth 928 feet. P. Flynn and others' No. 3 Woodard, dry and abandoned, total depth 1,110 feet. Mogren & Anderson's No. 3 Goetze, oil sand 894-905 feet, initial production 35 bbls., total depth 905 feet. W. W. Ports and others' No. 1 Chilson, dry and abandoned, total depth 1,900½ feet. Turman Oil Co.'s No. 23 Waggoner, dry and abandoned, total depth 1,053 feet. Schlaffke & Blair's No. 1 Jorabi, dry and abandoned, total depth 1,100 feet. A. T. Wolfe's No. 8 E. Daume, oil sand 745-55 feet, initial production 10 bbls., total depth 755 feet.

Wilbarger County

E. C. Harvey and others' No. 1 Bowers, dry and abandoned, total depth 1,362 feet. John O'Neil's No. 2 Castleberry, dry and abandoned, total depth 1,540 feet. The Texas Company's No. 406 Waggoner, oil sand 1,063-66 feet, initial production 20 bbls., total depth 1,066 feet.

Young County

Mel Armstrong's No. 1 Mrs. C. Ferguson, dry and abandoned, total depth 650 feet. Bray and others' No. 1 Casey, dry and abandoned, total depth 625 feet. G. C. Browning's No. 1 Howard, dry and abandoned, total depth 735 feet. Cable Oil Co.'s No. 26 Snider, dry and abandoned, total depth 665 feet. H. Craig and others' No. 1 City of Olney, dry and abandoned, total depth 1,051 feet. R. P. Dorian's No. 11 Belknap, oil sand 701-12 feet, initial production 15 bbls., total depth 712 feet. Hunter Oil Corp.'s No. 1 Davis, dry and abandoned, total depth 1,171 feet. Iron Mountain Oil Co.'s No. 14 Tatu, dry and abandoned, total depth 676 feet; No. 1 Young, County Lumber Co., dry and abandoned, total depth 603 feet. Lester and others' No. 1 Terrell, dry and abandoned, total depth 753 feet. Mook Tex Oil Co.'s No. 1 Bullock, dry and abandoned, total depth 1,009 feet. J. J. Moran and others' No. 1 Jeffery, dry and abandoned, total depth 905 feet. W. R. Stafford's No. 1 Casey, dry and abandoned, total depth 942 feet. United Producers Co.'s No. 6 Larimore, oil sand 698-99 feet, initial production 10 bbls., total depth 999 feet. Wheeler & Brashear's No. 1 Larimore, dry and abandoned, total depth 670 feet. H. J. Whitaker's No. 2 Hannan, dry and abandoned, total depth 603 feet. Wooten & Reed's No. 1 Cole, oil sand 696-99½ feet, initial production 40 bbls., total depth 699½ feet. Jacob Oil & Gas Co.'s No. 1 Thedford, dry and abandoned, total depth 3,777 feet. D. Knox and others' No. 1 Brashears, oil sand 2,695-2,713 feet, initial production 150 bbls., total depth 2,713 feet.

COMPLETIONS IN RANGER DISTRICT

Callahan County

Matson Drilling Co.'s No. 1 Radford, dry and abandoned, total depth 411 feet; No. 3 Radford, dry and abandoned. Woodley Petroleum Co.'s No. 24 Radford, oil sand 377-403 feet, initial production 5 bbls., total depth 403 feet.

Coleman County

Gibson and others' No. 1 Stevens, dry and abandoned, total depth 2,203 feet.

Brown County

Young Brothers and Alexander's No. 5 Kilgore, dry and abandoned, total depth 1,260 feet.

Palo Pinto County

Brazos River Oil & Gas Co.'s No. 3 Bridges, dry and abandoned, total depth 1,530 feet.

Shackelford County

Edwards and others' No. 3 McCassland, oil sand 708-16-19-21 feet, shot 15 quarts, initial production 8 bbls., total depth 723 feet. Lowe & Delaney's No. 4 A. Alexander, sand 703-18 feet, initial production 10 bbls. and 1,500,000 feet of gas, total depth 855 feet. Tannehill Oil Co.'s No. 32 Newell, sand 942-50 feet, shot 15 quarts, initial production 10 bbls., total depth 957 feet.

Many Angles to Problem of Retail End of Industry

(Continued from Page 9)

when it comes to placing responsibility for the causes of these developments.

With the close of the World War gasoline demand both export and domestic, increased rapidly and the domestic gain continued through 1931. Expansion in crude oil production and refining kept pace with the consumer requirements and there never has been any time in the past 14 years when was any danger of a serious shortage of crude oil supplies and refinery output. In fact except for brief periods there were excess supplies of crude oil and refinery output, reflected in a steady gain in crude oil inventories aboveground. Over the past two years there has been some decrease in the latter offset by a large gain in the known supplies underground commonly called "potential supplies."

This situation coupled with the supposedly wide margins allowed a few years ago for marketing after the products left the refineries is held responsible for the decision of many newcomers to enter the distributing end. As explained by one company executive, companies with large crude oil production unable to dispose of all their output at prices which they thought the oil should command, built or acquired refinery outlets. Later they were equally dissatisfied with the tank car markets available for their refinery outputs and they decided to go the final step and enter the retail division. This process of integration on the part of individual companies has included facilities for pipe line and water transportation and has necessaitated several large mergers. Duplication of marketing facilities and higher operating costs as previously explained were the inevitable result of these expansions. For the veteran marketing organization every newcomer has meant reduced gallonage so that concerns who once had the bulk of the gallonage in a particular section are now just one of many. The market dominance of major distirbutors with its advantages or disadvantages depending on the point of view, no longer exists for a large part of the country and prices for a particular territory as one sales manager explains, "are determined by the latest newcomer who is trying to get a foothold without regard to immediate profits."

Relation of Crude Market

As to causes there are those who will not agree with the above statement that too wide margins for marketing a few years ago served to attract new concerns into that end of oil operations. They state that a careful investigation would have shown that profits in that branch were not excessive and that many decided to build bulk and retail stations without any realization of the costs and problems incidental to providing gasoline, motor oils and other petroleum products in a rapidly increasing market. From this viewpoint one hears that the real source of the trouble was the maintenance of too high prices for crude oil which caused excess supplies to be brought to the surface for which there was no market. To get rid of these surpluses, individual companies conceived the idea of extending their operations through refining and marketing and dumping this crude in the form of finished gasoline on the retail markets with the resulting demoralization of prices.

It is claimed that this policy continues in some instances until the present time. These companies have so conducted their retail operations in regard to prices that if their entire operations were checked back to their wells it would be found that they are not securing the prevailing posted schedules for their crude oil. In brief it is contended that certain companies having all or nearly all their crude oil production have not reflected posted schedules in their entire operations, thus working a hardship on the concern which buys all or a large part of its crude oil supplies and then tries to secure a return on its refinery and marketing operations only to find that the prices established in the latter do not have the needed relationship to the cost of crude oil.

This situation over the past year has been aggravated by bootleg crude oil produced in violation of proration orders in certain flush fields of the Mid-Continent. Regardless of how this oil is obtained, the crude invariably is refined and thrown on the market with little regard to prices obtained, the owner apparently figuring that any return is better than nothing. While the quantity of this bootleg crude has been small compared to the total production, it has been refined and sold by several small refiners and has contributed its part to the general lowering of all markets in which it entered.

As one phase of the problem of overproduction it is said that certain financial interests during the boom period were in part responsible for the changes of operations which has brought the wide duplication of facilities in marketing. Those furnishing funds for expansions favored the companies whose operations were integrated, apparently under the belief that the concern engaged in all branches of the oil industry occupied an impregnable position in that it would be able to show profits in at least one phase of its operations. The limitations of this financial viewpoint are now apparent.

Regardless of causes, the effects cannot be denied. The industry now finds it difficult to take advantage of improved operations in the crude oil producing and refining branches because of conditions in its final markets.

When it comes to remedies the panaceas offered are comparable in variety to the diagnosis of the disease, being influenced somewhat by the positions of individual companies. "The boom period brought us some bad conditions in marketing but the depression is providing the cures," said one executive whose views are representative of others. "The period of unwarranted expansion is about at an end. The next step will be elimination through consolidation or otherwise of uneconomic marketing units reducing facilities to consumer requirements which is absolutely necessary before we can have satisfactory prices and profits."

This executive and others expressed the opinion that the past year had taught valuable lessons to those responsible for marketing policies with the establishment of groundwork which would be reflected in more satisfactory conditions during the coming year.

September Gasoline Stocks at Low Point

(Continued from Page 29)

accompanying table offers a convenient comparison.

STOCKS OF NATURAL GASOLNNE AT PLANTS AT THE CLOSE OF EACH MONTH EXPRESSED IN GALLONS

1931	
January	25,500,000
February	29,100,000
March	37,100,000
April	42,300,000
May	41,800,000
June	36,100,000
July	35,900,000
August	30,300,000
September	25,800,000
October	22,000,000
November	26,900,000
December	27,100,000
1932	
January	34,000,000
February	36,800,000
March	39,778,000
April	44,584,000
May	44,279,000
June	34,106,000
July	31,809,000
August	25,888,000
September	24,628,000

All data included in both tables were derived from reports made by the Bureau of Mines.

ROCKY MOUNTAIN RUNS

Average daily pipe line runs from fields in the Rocky Mountain territory for the week ending November 5 follow:

	Bbls.
WYOMING	
Salt Creek	20,929
Big Muddy	1,950
Badger Basin	50
Byron-Garland	1,010
Byron (East)	100
Dallas-Derby	440
Dutton Creek	70
Ferris	50
Frannie	160
Grass Creek	1,570
Hamilton Dome	930
Hudson	340
LaBarge	1,240
Lance Creek	60
Lost Soldier	2,240
Midway	110
Oregon Basin	820
Osage	1,140
Pilot Butte	30
Rock River	1,030
Poison Spider	70
Teapot	30
Total Wyoming	34,360
MONTANA	
Buckley-Border	570
Cat Creek	850
Cut Bank	40
Dry Creek	540
Kevin-Sunburst	3,320
Lake Basin	20
Pondera	1,190
Total Montana	6,530
COLORADO	
Florence	430
Fort Collins and Wellington	740
Iles Dome	600
Moffat	640
Orchard	170
Rangely	50
Tow Creek	270
Total Colorado	2,900
NEW MEXICO	
Artesia	500
Caprock	725
Hogback	420
Jal	1,112
Rattlesnake	624
Table Mesa	75
Eunice	536
Hobbs	24,991
Lea	2,220
Texas-Pacific	82
Total New Mexico	31,285
Total Rocky Mountain area	75,075
Total previous week	74,490
Difference	585

New Gasser in Tioga County, Penna., but Important Test in Potter Is Dry

By SPECIAL CORRESPONDENT

CORNING, N. Y., Nov. 5.—The Corning Glass Works' test on the Callahan farm, 5 miles north of Corning, topped the Oriskany sand at 3,010 feet and drilled to 3,058 feet and was given a 100-quart shot, but it is commercially a failure. The well had a showing of gas and the owners will leave the pipe in the hole so that the farm owner may have a gas supply for his home.

The test of S. J. Brendel and others on the Sheldon farm in Allen Township, Allegany County, New York, had a showing of gas of about 175,000 feet coming from Oriskany sand topped at 2,951 feet.

The eventual marketing of fuel from the Addison-Rathbone gas field in Steuben County, New York, is reported nearing completion with the arrival of five car loads of pipe which will be used for the construction of the southern half of the pipe line to Bath. The pipe is being unloaded at Cameron Mills.

Actual work on ditching on the south end of the line is expected to be started immediately. As soon as this work is started the pipe will be laid and workmen will start the process of welding the line at intervals throughout the field. The Southern Tier Gas Co. is the owner.

Six-inch pipe will be used for the main line that will run from a central point in the field to the village of Bath. There will be two branches of 4-inch lines laid at the central point to bisect important sections of the field. To those 4-inch lines will be connected 2-inch gathering lines.

Interest in this field is now centered around three wells being drilled in the northern sector. The Considine test was spudded at 100 feet Wednesday morning. The Saunders well is beyond 100 feet and the McCorkle is also reported in the spudding process, depth unknown. Much information as to the width of the field will be determined with the completion of the Saunders well which is the farthest north of the group.

The Penn United Co. has a gasser on land owned by the Lawrenceville Bank in Lawrence Township, Tioga County, Pennsylvania. It was making 2,500,000 feet of gas when 5 feet in the Oriskany sand, the top of which was at 3,923 feet. Later reports from the field did not change the production figures. The well has been capped, but the total depth was not definitely learned.

Several drilling wells in Potter County, Pennsylvania, are reported to be close to completion depth, and the Hammondsport Natural Gas Co.'s No. 1 W. L. Gale, about 2 miles from gas production, was abandoned as a failure. Schrack's No. 2 Tassell was drilling below 5,165 feet and it was about ready for casing. Casing has been cemented in Allegheny Gas Co.'s No. 1 Carpenter, and it was to have been drilled in today or Sunday. This test is not far from the discovery lease on which there are two large gas producers and it got the top of the Oriskany sand at 4,780 feet. Robert Hungiville was below 900 feet in his No. 1 Sturtevant. Up near the state line in Potter County, John Cunningham and others are moving in to drill a test on the John Moran farm in Oswayo Township.

The Allegheny Gas Co. is still fishing in its deep hole on the Emporium Lumber Co.'s property in the East Fork district, Potter County.

East Central Texas Wildcats

(Continued from Page 34)

GREGG COUNTY

Joe Anderson et al's No. 1 G. Shaw, center of 3-ac. lease, W. H. Dixon et al's No. 1 Clayborn, 400 ft. W of Angle and Kirkendall, I. Beaty Sur. ..... Drlg. 2,826 ft.

Jack Blalock's No. 1 State School Lands, 150 ft. from S line and 69 ft. from W line of lease, State Land Sur. ..... Drlg. 3,350 ft.

D. F. Buffington's No. 1 S. L. Dansby, 150 ft. from S line and 1,700 ft. from E line of 30-ac. lease, W. P. Chisum Sur. ..... Drlg. 3,237 ft.

Corbin et al's No. 1 A. H. Tubbs, 330 ft. from S and W lines of 50-ac. lease, D. Sanches Sur. ..... T.D. 3,596 ft.; S.D.

Rose V. Glasscock's No. 2 A. V. Bacle, 152 ft. W and 155 ft. N of NE cor. of Gulf's Bacle lease, G. W. Hooper Sur. ..... Drlg. 3,559 ft.

Lewis Godlin's No. 1 E. L. Walker, 330 ft. N of road, 330 ft. from E line of 80.2-ac. tract, M. Dillard Sur. .... Derrick.

Groveman and Dorian's No. 1 M. E. Church, center of N half of Blk. No. 4, M. Dillard Sur. ..... Drlg. 3,250 ft.

Groveman and Dorian's No. 1 State, center of Mineral Sur., Tract No. 112 ..... Drlg. 2,650 ft.

Guinn Petroleum Co.'s No. 1 J. S. and F. Elder, 200 ft. NE of Solar's No. 1 Elder, and 450 ft. SE of Martin's No. 1 Elder, M. V. Winkle Sur. ..... Derrick.

A. R. Hancock's No. 2 L. H. Brawley, 550 ft. E of No. 1 P. McAnnelly Sur. ..... Moved derrick off.

T. D. Humphrey et al's No. 1 Branson, center of 3.11-ac. lease, D. Meredith Sur. ..... Top sand 3,627 ft.; drill stem test 3,580-3,632 ft.; 7 fourbles made; show oil and gas; 45 min. swabbing; T.D. 3,638 ft.

J. J. Jordan's No. 1 E. L. Walker, 660 ft. W of SE cor. of lease and 155 ft. from S line and 155 ft. from river, E. A. Lambert Sur. ..... T.D. 3,596 ft.

S. H. Killingsworth's No. 1 State, 160 ft. from S line of river and center of E and W lines, State Land Sur. ..... Drlg. 1,100 ft.

Kinnebrew and Simpson's No. 2 R. B. Walls, center of E and W lines of lease and N offset to The Texas Company's No. 6 Walls ..... Derrick.

E. Lacy et al's No. 1 fee, 144 ft. S and 150 ft. E of NE cor. of Shell's Neill lease, M. V. Winkle Sur. .... Drlg. 3,460 ft.

J. M. Lapin's No. 1 fee, 437 ft. S and 224 ft. E of NE cor. of Humble's Knowles lease in 1.09-ac. tract, M. V. Winkle Sur. ..... Location.

H. H. LeMasters' No. 2 W. T. Thompson, 90 ft. from S line and 70 ft. from W line of Blk. No. 151, M. V. Winkle Sur. ..... Derrick.

Luttes et al's No. 1 Register, 330 ft. from S line and center of E and W lines of 13-ac. lease, G. F. Penn Sur. ..... Derrick.

Madalyn Oil Co.'s No. 1 J. V. Rossen, 550 ft. N and S and 100 ft. E and W of tract, T. Johnson Sur. ..... Waiting on cmt. to set 105 ft.

Magnolia Petroleum Co.'s No. 2 H. P. Hale, 330 ft. from W line of 50-ac. tract and 660 ft. S of No. 1, Tract No. 1, M. V. Winkle Sur. ..... Derrick.

Magnolia Petroleum Co.'s No. 1 E. Prothro, center of 5-ac. tract, J. T. McDaniels Sur. ..... Rig up.

Martin Drilling Co.'s No. 2 J. S. and F. Elder, 175 ft. from N line of lease and 500 ft. NE of No. 1, M. V. Winkle Sur. ..... T.D. 3,601 ft.; set csg.

Mullendore and Berry's No. 1 E. H. Bramley, 110 ft. from N and S lines and 225 ft. from W line of lease, P. McAnnely Sur. ..... Waiting on cmt. to set; T.D. 3,-535 ft.

Newman et al's No. 2 O. Prothro, S offset to Iotex' No. 1 J. A. Knowles, J. Blair Sur. ..... Set surface csg.

J. B. Patty et al's No. 1 Farrell, 330 ft. S and 175 ft. W of NE cor. of E 50 acres of 148-ac. tract, D. Sanches Sur. ..... Derrick.

Pennsylvania Oil & Gas Co.'s No. 2 T. B. Harris, 330 ft. from S line and 150 ft. from W line of 20-ac. lease, J. Ruddle Sur. ..... S.D. 3,515 ft.

Pierce and Moore's No. 1 J. S. and F. Elder, center of 1-ac. tract and lease, M. V. Winkle Sur. ..... Derrick.

Rhodes Drilling Co.'s No. 2 Sabine River, Tract No. 4, 309 ft. NW of The Texas Co.'s No. 3 Cole ..... Rig up.

Ruston Drilling Co.'s No. 2 Sabine River, Tract No. 3, 660 ft. W of No. 1 ..... Rig up.

Ruston Drilling Co.'s No. 3 Sabine River, Tract No. 3, 1,660 ft. W of E line ..... Drlg. 2,545 ft.

A. Snyder's No. 1 H. Adkins, 1,800 ft. from S line and center of a tract being N of S line of 5.37 acres of 9.37-ac. tract, Lot No. 2, D. Dainwood Sur. ..... Derrick.

South Gulf Prod. Co.'s No. 1 Cemetery, 225 ft. NW of Barnsdall's No. 1 McGrede, on one-half acre lease, D. Sanches Sur. ..... S.D. 200 ft.

J. B. Sowell's No. 2 W. P. Luce, 378 ft. W of No. 1, E. L. Walker Sur. ..... Derrick.

F. D. Spratt's No. 2 W. E. Bumpass, 140 ft. from S line and 80 ft. from E line of lease, L. J. Rigsby Sur. ..... Waiting on cmt. to set; T.D. 3,-616 ft.

Sun Oil Co.'s No. 3 W. L. Fuller, 359 ft. from W line of lease and 660 ft. S of No. 1, D. Sanches Sur. .... Rig up.

W. C. Turnbow's No. 2 McKinley, 125 ft. N and 420 ft. E of NE cor. of Yount Lee's Harley lease, D. Sanches Sur. ..... Derrick.

Universal Oil & Gas Co.'s No. 2 Adkins, 750 ft. S of No. 1, D. Dainwood Sur. ..... Derrick.

Vance and Fagan's No. 1 W. N. Crim, 50 ft. out of NE cor. of Blk. No. 117, M. V. Winkle Sur. ..... Drlg. 2,940 ft.

HENDERSON COUNTY

B. L. Green et al's No. 1 M. H. Gussett (old well drilled deeper), 150 ft. from N line and 1,000 ft. from W line of 105.5-ac. tract, 3 miles SW of Mabank, L. D. Stover Sur. ..... S.D. 3,328 ft.

Dr. J. T. Kennon et al's No. 1 Rowe & Baker, 1,320 ft. from N line and 150 ft. from W line of survey and tract, Josiah T. Childress Sur. ..... S.D. 920 ft.

H. H. Meyer's No. 1 M. E. Olson, 2 miles S of Brownsboro tract in NW cor. of survey, George Wilson Sur. ..... T.D. 3,669 ft.

HILL COUNTY

T. J. Spikes' No. 1 M. H. Davis, 150 ft. from S and E lines of 55-ac. tract, H. R. Alexander Sur. ..... Drlg. 1,345 ft.

HOPKINS COUNTY

Burgess and Sinson's No. 1 First Natl. Bank, 470 ft. N and W of SE cor. D. Buie Sur., but located in the H.E.P.&P.R.R. Sur. ..... Drlg. 1,200 ft.

Columbia Oil & Gas Co.'s No. 1 McCloud, 150 ft. from S line and 200 ft. from E line of lease, Holbrook Sur., elev. 485 ft. ..... S.D. 2,740 ft.

Roark et al's No. 1 Taylor, 220 ft. from N and W lines of 80-ac. tract, in the John Polk Sur. ..... S.D. 540 ft.

HUNT COUNTY

A. Kelsey et al's No. 1 W. R. Berry, 450 ft. from S line and 300 ft. from E line of 139-ac. tract, J. Roads Sur. ..... Location.

KAUFMAN COUNTY

George Anderson's No. 1 W. N. Moody, 1,980 ft. S, 45 deg. E and 660 ft. S, 45 deg. W of NW cor. of survey, George Heider Sur. ..... Drlg. 3,820 ft.

P. L. Meader's No. 1 T. C. Coleman, 673 ft. from S line and 460 ft. from W line of 259-ac. tract, W. G. Gibbard Sur. ..... S.D. 1,115 ft.

LAMAR COUNTY

Doyle and Jondeau's No. 1 Martin, 990 ft. from N line and 330 ft. from E line of tract, Joseph Deck Sur. ..... Rig up; T.D. 2,446 ft.

LEON COUNTY

Alladay et al's No. 1 W. R. Thompson, 330 ft. from N line of survey and 330 ft. from E line of 98-ac. tract, N. M. Allen Sur. ..... S.D. 2,170 ft.

Shell-Penn & Black's No. 1 W. M. Phillips ..... Drlg. 5,725 ft.

MORRIS COUNTY

Grover Hart's No. 1 Walcott and Lott, 250 ft. from N line and 330 ft. from E line of survey, 3 miles S of Carson, B. A. Russell Sur. ..... Drlg. 180 ft.

Joiner & Harris Drilling Co.'s No. 1 Clayton Brown, 1,625 ft. N. of most easterly SW cor. of survey, William M. Coffey Sur. ..... Derrick.

Leonard's (Tucker-Fullwood) No. 1 P. M. Staggers, 450 ft. from N line and 150 ft. from E line of 65-5-ac. tract, J. D. Nelson Sur. ..... Circulating to run 4½-in. csg; T.D. 3,672 ft.

POLK COUNTY

Cannon et al's No. 1 Roberts, 10 miles N of Livinston, Romera Sur. ..... Rig up and shut down.

RED RIVER COUNTY

Concord Oil Co.'s No. 1 J. R. Dallahunty, 500 ft. from N of Isaac Moore Sur. and 200 ft. E of E line of Robert Glass Sur. ..... Drlg. 2,700 ft.

L. G. Priest's No. 1 R. W. Peck, 900 ft. N and 500 ft. S of southerly SE cor. of 220-ac. tract, A. Wagley Sur. ..... Derrick material.

ROCKWALL COUNTY

Bucanner Oil Co.'s No. 1 H. L. Lofland, center of 69-ac. tract in W. M. Bird Sur. ..... Set 10-in. csg. 130 ft.

RUSK COUNTY

Acme Oil Co.'s No. 1 G. Bean, located in a 2-ac. tract, J. Lewis Sur. ..... Rig up.

T. C. Adams' No. 1 L. Marwell, 540 ft. N and 330 ft. E of NE cor. of Arksnasa Marwell tract on 19.77-ac. lease, T. H. Smith Sur. ..... Derrick.

Arrow Refining Co.'s No. 1 Town Heirs, 150 ft. S and 50 ft. W of Arrow Refining Co.'s No. 3 Thrash, F. Cordova Sur. ..... Testing 3,790 ft.

Barnsdall Oil Co.'s No. 2 Gill, 302 ft. from N line and 330 ft. from W line of lease, R. W. Smith Sur. ..... Rig up and S.D.

Big Indian Oil Co.'s No. 1 Joe Lee, 172 ft. from S line and 990 ft. from W line of 24-ac. lease, Peter Tipps Sur. ..... Waiting on cmt. to set 3,640 ft.

Boggs et al's No. 1 J. Border, 280 ft. S of Wyche's No. 1 Arnold on 5-ac. lease, P. W. Holmes Sur. ..... T.D. 3,699 ft.

Brooks Petroleum Co.'s No. 1 Mayfield, Daniel Clark Sur. ..... Top sand 3,622 ft.; waiting on standard rig; would not flow; T.D. 3,702 ft.

T. E. Castle's No. 1 R. H. Gary estate, 3,960 ft. from N line and 5,280 ft. from W line of survey, 10 miles S of Henderson, A. Latham Sur. ..... Fishing 3,812 ft.

Cronn and Gracy's No. 2 M. L. Thompson, 330 ft. from S line and 198 ft. from E and W lines of 14-ac. lease, Isaac Moore Sur. ..... Derrick.

Daniels and Scott's No. 1 J. R. Irion, W offset to George Pipes' No. 1 Irion, John Womack Sur. ..... Drlg. 2,840 ft.

Carl Dunham's No. 1-A Scroggins, 330 ft. E of G. C. Wood E line and E offset to Wood's No. 3, E. Collard Sur. ..... Drlg. 2,100 ft.

Dyck Oil Co.'s No. 2 C. O. Crim, 150 ft. from S line and center of E and W lines of 14-ac. lease, George Berry Sur. ..... Set surface csg.

East Texas Loan & Investment Co.'s No. 2 Bradberry, 330 ft. from N and W lines of lease, R. W. Smith Sur. ..... Waiting on cmt. to set; T.D. 3,-650 ft.

G. W. Eaton's No. 1 fee, 150 ft. E and midway between Weisman's No. 2 Brightwell, R. W. Smith Sur. ....Drlg. 3,091 ft.
Gillen et al's No. 2 Brightwell, S offset to Oliver and Spaldin's No. 1 Brightwell, R. W. Smith Sur. .....T.D. 3,643 ft.; set csg.
Gulf Production Co.'s No. 1 Hosen Baton, 1,210 ft. W and 330 ft. S of NE cor. of lease, Mary Cogswell Sur. .....Waiting on cmt. to set; T.D. 3,657 ft.
Harris and Russell's No. 1 T. W. Harris, 330 ft. from S line and 660 ft. from W line of most southerly SW cor. of 160-ac. tract, 3 miles SW of Henderson, W. G. Davis Sur. .....Derrick.
Hasting and Dodson's No. 1 E. B. S. Florey, 267 ft. from S line and 287 ft. from E line of 25-ac. lease, P. W. Holmes Sur. .....Fishing; T.D. 3,670 ft.
Hathaway et al's No. 1 Gray, J. M. McLain Sur. .....T.D. 3,865 ft. (corrected).
Helden-Rodgerson et al's No. 1 Barton and Birdwell, N offset to Reisinger et al's No. 1 Barton, W. G. Tutt Sur. .....Testing 3,794 ft.
Iotex Oil Co.'s No. 2 Tom Beall, 330 ft. from S and E lines of lease, P. W. Holmes Sur. .....Set csg.; T.D. 3,735 ft.
J. Jeagen's No. 1 Needham, 330 ft. from N line of lease and 330 ft. from NE and 400 ft. from SE of survey, J. H. Chambers Sur. .....S.D. 1,414 ft.
Killum and Gibbs' No. 1 Bradford, SW offset to Hunt's No. 2-A Bradford and 150 ft. S of road, Juan Ximenes Sur. .....Drlg. 1,200 ft.
Luling Oil & Gas Co.'s No. 2 Barton, 135 ft. from N and S lines and 160 ft. from E and W lines of lease, McCabe Sur. .....Location.
C. H. Lyons' No. 1 W. Moore, 330 ft. from N and W lines of lease, M. V. Pena Sur. .....Testing 3,633 ft.
Marr Drilling Co.'s No. 2 John Rettic, 330 ft. from N and W lines of 180.56-ac. tract, J. H. Sparks Sur. ...Bldg. derrick.
McMahon and McCulloch's No. 1 Joe Lee, 2,323 ft. from E line and midway between N and S lines of lease, Peter Tipps Sur. .....Drlg. 3,350 ft.
John Menke's No. 1 C. F. Bradbury, 330 ft. from S and E lines of lease, W. R. Cooke Sur. .....Drlg. 2,847 ft.
R. S. Monroe's No. 1 Daisy Bradford, 330 ft. N and E of NE cor. of Blk. No. 8 of Hunt's Bradford lease, Juan Ximenes Sur. .....Drlg. 1,900 ft.
Paulett et al's No. 1 Ed Sparks, 350 ft. from E, 150 ft. from S of survey, L. C. Riggs Sur. .....S.D. 1,465 ft.
Ross Seward's No. 1 Burton, J. J. Y'Barbo Sur. .....T.D. 3,387 ft.
Fred Shields and Florence Oil Co.'s No. 1 R. L. Buckner, 330 ft. from N and W lines of 320-ac. tract and survey, John E. Davis Sur. .....Drlg. 3,660 ft.
Sibling and Williams' No. 1 Goforth, 212 ft. from N line and 230 ft. from E line of tract, being on E 18.75-ac. tract, E. Thompson Sur. .....Set surface csg.
Smith and Sikes' No. 1 Frederick, 150 ft. S of SE cor. of E. D. Oil Co.'s Alford lease, I. G. Parker Sur. .....Standing; T.D. 3,685 ft.
Stanolind Oil & Gas Co.'s No. 1 J. W. Ashby, 330 ft. from N and W lines of 107.6-ac. tract, Milton Walker Sur. .....Rig up.
Stewart and Duffy's No. 1 Solar Jackson, 330 ft. from N and E lines of lease, P. W. Holmes Sur. .....Drlg. 2,800 ft.
M. M. Travis' No. 1 J. Horton, 330 ft. from S and W lines of lease, J. S. Barnett Sur. .....Waiting on cmt. to set 3,422 ft.
Winn et al's No. 1 Brightwell, W offset to Gillen's No. 2 Brightwell, R. W. Smith Sur. .....Drlg. 3,668 ft.

SMITH COUNTY

J. O. Allen's No. 1 fee, 330 ft. from S and E lines of 250-ac. tract, M. G. Henriques Sur. .....Location.
Boucher-Owen and McCulloch's No. 1 Beulah Means, 2,775 ft. from S line and 330 ft. from E line of lease, E. Daniels Sur. .....S.D. 1,300 ft.
Cockburn and Hooker's No. 3 Lula Jackson, 330 ft. from S and E lines of 76-ac. lease, E. Daniels Sur....Rig up and S.D.
Golden Eagle Oil Co.'s No. 1 T. B. Collier, 137 ft. from S line and 150 ft. from E line of lease, J. Jordan Sur. .....Derrick down.
Golden Eagle Oil Co.'s No. 1 E. E. Moore, 330 ft. from N and E lines of 8-ac. lease, Juan Vargus Sur. .....Derrick.
W. T. Graham's No. 1 Cooke, 400 ft. N and 36 ft. W of SW cor. of Sinclair Prairie's Dora Wright 162.2-ac. tract, Juan Vargas Sur. .....Derrick.
Stewart Holing, Inc.'s No. 1 T. O. Wright, N offset to Brogan's No. 4 Wright, Juan Vargas Sur. .....Drlg. 2,850 ft.
Hooper et al's No. 1 Lula Jackson, 330 ft. S and 330 ft. E of most northerly SW cor. of Monroe Shell Robinson lease, E. Daniels Sur. .....S.D. 3,815 ft.
Joiner et al's No. 1 C. S. Jackson .....Pulling pipe; prepare to abnd; T. D. 4,045 ft.
Alex McCutchin's No. 1 Jessie Cole, 108 ft. from S line and 110 ft. from E line of 1.27-ac. lease, J. Jordan Sur. .....Derrick down.
McRabie et al's No. 1 C. P. Hamilton, 330 ft. from S and E lines of 255-ac. tract, Jackson Rector Sur. ..Rig up and S.D.
Mundt et al's No. 1 W. E. Murray, 330 ft. from S and E lines of lease, 5 miles SE of Tyler, Marshall Wynn Sur. .....T.D. 4,680 ft.
Sun Oil Co.'s No. 13 O. W. Knight, between No. 4 and No. 12 and 831 ft. W of No. 4, D. Collins Sur.....Derrick.
Sun Oil Co.'s No. 2 Hudnott and Melton, 330 ft. from N and E lines of 137.5-ac. lease, M. D. L. S. Coy Sur. .....Derrick.
The Texas Company's No. 6-B Jarvis, 2,310 ft. S and 330 ft. E of NW cor. of lease, M. D. L. S. Coy Sur. .....Drlg. 3,664 ft.
Ed Wallace et al's No. 1 Jessie Cole, 150 ft. from S line of lease and due W offset to Smith's No. 1 Cole on 10-ac. lease, J. Jordan Sur. .....Fishing for bit; T.D. 2,894 ft.
Weaver Crim Oil Co.'s No. 3 T. Stone fee, 330 ft. from S line and E offset to Monroe's No. 1 Robinson, D. Shaw Sur. .....Drlg. 2,160 ft.

TITUS COUNTY

Perry V. Cook's No. 1 M. C. Rogers, center of SW of Moore Sur. .....T.D. 4,212 ft.

UPSHUR COUNTY

Cranfill & Reynolds' No. 1 H. M. and B. B. Berry, 935 ft. from N line and 2,000 ft. from W line of survey, J. P. Hutchinson Sur. .....Drlg. 1,000 ft.
J. P. Evans et al's No. 1 Bell, 700 ft. from N line and 900 ft. from E line of 60-ac. lease, William Fadden Sur. .....Plugging 3,946 ft.; top sand 3,525 ft.
Everetts Oil Co.'s No. 4 A. J. Sanders, 330 ft. from S and W lines of lease, T. Allen Sur. .....Derrick.
Lewis Godlin's No. 2 J. T. Mackey, 660 ft. SW of No. 1 and 220 ft. NW of highway .....Drlg. 3,210 ft.
Heydrick and Camp Drilling Co.'s No. 1 Shelton, center of 2½-ac. tract, William King Sur. .....Drlg. 2,000 ft.
Pat Hudson et al's No. 1 D. F. Smith, 330 ft. out of SE cor. of W 100 acres of the N 200 acres of the 272-ac. lease, 3 miles E and 1½ miles N of Cranfill & Reynolds' No. 1 Rash, John Denson Sur. .....Waiting orders 3,710 ft.
J. C. Kerby and Refugio's No. 1 Ben H. Reed, 262 ft. from S line and 845 ft. from E line of 189-ac. tract..Location.
Lynch and McQuiag's No. 1 L. T. Mackey, 330 ft. from S line of road and 230 ft. from E line of road, Sarah Harrell Sur. .....Derrick.
Maddox Development Co.'s No. 1 D. A. Fleet, 130 ft. from N and E lines of survey, I. N. Stephens Sur....S.D. 2,730 ft.
T. C. McKinney's No. 2 E. H. Brawley, 330 ft. from S and E lines of lease, William King Sur. .....Rig up.
Stroube and Stroube's No. 2 Mackey, N offset to Mabee's No. 3 Whitehurst, D. Ferguson Sur. .....Spudding.
Tucker and Van Flech's No. 1 S. J. Mangham, 1,320 ft. E and 640 ft. S of SW cor. of M. Ward survey, 2 miles E of Gilmer, J. J. Hooper Sur. .....Drlg. 500 ft.
Twin Oil Co.'s No. 2 C. J. Mackey, 330 ft. from S line of lease and 660 ft. W of No. 1, J. M. Pineda Sur. .....Rig up.
R. H. Vico et al's No. 1 L. Graves, 330 ft. from S and W lines of 106-ac. lease, M. Irwin Sur. .....Set csg.; T.D. 3,676 ft.
Wadley and Evans' No. 1 W. S. Jones, 330 ft. from S and E lines of 100-ac. lease, James M. Dunn Sur. ...S.D. 3,690 ft.
Watson's (formerly Kinsey) No. 1 D. F. Smith, 466 ft. from S line and 1,165 ft. from E line of 266-ac. tract, J. R. Davis Sur. .....S.D. 1,856 ft.

VAN ZANDT COUNTY

Barton et al's No. 1 C. L. Hubbard, 600 ft. out of NE cor. of Hubbard 225-ac. tract, 3¼ miles S of Canton, M. J. De Cadena Sur. .....S.D. 2,596 ft.
Kelly O. & G. Co.'s No. 1 Lemsford, center of Lemsford tract, John Conner Sur. .....S.D. 2,300 ft.
Killum & Chisum's No. 1 N. E. Clark, 165 ft. out of most westerly NW cor. of tract, 2 miles S of Van, Jackson Thomas Sur. .....Rig up.
Lyman et al's No. 1 J. C. Stewart, 150 ft. from N line and 650 ft. from W line of 90-ac. tract, A. McPhail Sur. .....T.D. 2,731 ft.
Pure Oil Co.'s No. 6 R. E. Cade, 225 ft. W of E line and 225 ft. N of S line of lease, A. McPhail Sur. ....Moving in rotary.
Pure Oil Co.'s No. 2 Sam Allen, 200 ft. S of N line and 225 ft. E of W line of lease, J. Prado Sur. .....Drlg. 2,050 ft.
Pure Oil Co.'s No. 2 R. A. Enas, 150 ft. S of N line and 225 ft. E of W line of lease, Jackson Thomas Sur.....Derrick.
Pure Oil Co.'s No. 8 W. F. Swain, 250 ft. S of N line and 250 ft. W of E line of W. F. Swain 40-ac. tract in John Walling Sur. .....Drlg. 2,460 ft.
Pure Oil Co.'s No. 10 A. E. Tunnell, 250 ft. S of N line and 250 ft. W of E line of lease, John Walling Sur. .....Testing 2,940 ft.
A. C. Rowan's No. 1 W. E. Price, 150 ft. from N line and 150 ft. from W line of 28-ac. tract, John Walling Sur. .....S.D. 2,942 ft.
Roy Stumpff's No. 1 M. I. Riggs, 169 ft. from E line and 250 ft. from S line of tract No. 2 and 330 ft. from E line of lease, 4 miles NE of Van, William Daniel Sur. .....Rig up and S.D.
Van Oil Association's No. 1 Tankersley, 200 ft. from E and 1,000 ft. from S of farm, L. Landers Sur. .....T.D. 2,850 ft.
C. O. Weir's No. 1 W. B. Tunnell, 150 ft. from N and W lines of lease, A. H. Wiley Sur. .....Location.

WOOD COUNTY

De Canther's No. 1 N. L. McLain, 350 ft. from N line and 642 ft. from E line of tract, Sam Brooks Sur.....S.D. 3,835 ft.
F. B. Parriott's No. 1 John G. Harvey, 200 ft. from N line and 2,801 ft. from W line of survey, 6 miles E of Quitman, Meredith H. Ussery Sur. .....Shut down.
W. B. Saulsbury's No. 1 T. H. Peters, 600 ft. from S line and 200 ft. from E line of 320-ac. tract and survey, 4 miles E of Mineola, W. B. McNutt Sur. .....S.D. 400 ft.
Talko Oil Co.'s No. 1 G. T. Ross, B. L. Smith Sur. .....Fishing 3,840 ft.
Wood County Dev. Co.'s No. 1 Davis, approximately 180 ft. from S line of 160-ac. tract and 2½ miles S of Kantes in Sarah McDonald Sur. .....T.D. 3,285 ft.

Wildcat Operations in West Texas

(Continued from Page 35)

FISHER COUNTY

Cranfill & Reynolds' No. 1 George, 400 ft. from N and 380 ft. from E, Sec. 200, Blk. 1, B.B.B.&C. Sur. .....T.D. 6,289 ft.; to drill up baller.
Southern Oil Co.'s No. 1 Purdue, 990 ft. from S and E Sec. 202, Blk. B, B.B.&C. Sur. .....Drlg. 2,975 ft.

GLASSCOCK COUNTY

Empire G. & F. Co.'s No. 1 Hall, 330 ft. from N and 2,290 ft. from W, Sec. 21, Blk. 33, Twp. 2s .....Location.
B. C. Mann's No. 1 Moore, C NE, Sec. 11, Blk. 35, Twp. 3s, T.&P. Sur. .....Drlg. 3,200 ft.
Noble Drlg. Co.'s No. 1 Baker, 160 ft. from N and 1,116 ft. from E, Sec. 21, Blk. 33, Twp. 2s, T.&P. Sur. .....Spudded.
Phillips Pet. Co.'s No. 1 Baker, 150 ft. from N and 1,520 ft. from E, Sec. 21, Blk. 33, Twp. 2s, T.&P. Sur. .....T.D. 2,120 ft.; swabbed 71 bbls. per hour; T.D. 2,132 ft.
Phillips Pet. Co.'s No. 2 Baker, 338 ft. from N and 2,305 ft. from E, Sec. 21, Blk. 33 .....Bldg. derrick.
Shell Pet. Corp.'s No. 2 Phillips, 2,310 ft. from N and 1,650 ft. from E, Sec. 23, Blk. 33, Twp. 2s .....Bldg. derrick.
Tribal Oil Co.'s No. 1-B Edwards, 180 ft. from S and 1,145 ft. from E, Sec. 16, Blk. 33, Twp. 2s, T.&P. Sur...Drlg. 2,160 ft.

HOWARD COUNTY

American-Maracaibo's No. 5-A Settles, 1,896 ft. from N, 1,824 ft. from W, Sec. 6, Blk. 32, T.&P. Sur. .....S.D. 185 ft.
Green O. & R. Co.'s No. 1 Denman, 990 ft. from S and 2,310 ft. from W, Sec. 14, Blk. 30, Twp. 1s, T.&P. Sur..Spudded and S.D.
Harrison et al's No. 3 Denman, 2,310 ft. from N and 330 ft. from E, Sec. 10, Blk. 30 .....Location.
Myers et al's No. 1 Denman, 2,305 ft. from S and 2,320 ft. from E, Sec. 14, Blk. 30, Twp. 1s, T.&P. Sur. .....Drlg. 1,515 ft.
Mid-Continent Oil & Gas Co.'s No. 1 Denman, 990 ft. from S and 330 ft. from E, Sec. 10, Blk. 30, Twp. 1s, T.&P. Sur. .....Drlg. 1,926 ft.
Sinclair Prairie Oil Co.'s No. 3 Dodge, 1,650 ft. from S and 429 ft. from W, Sec. 11, Blk. 30, Twp. 1s, T.&P...T.D. 2,800 ft.; shot 300 qts. 2,660-2,800 ft.; cleaning out.

HUDSPETH COUNTY

Patillo-Welsh's No. 1 Briggs .....Drlg. 1,170 ft.

IRION COUNTY

Stanolind Oil & Gas Co.'s No. 1 Williams, 1,320 ft. from S and E of Sec. 1,196, T.T.R.R. Sur. .....S.D. 6,519 ft.; plugging.
Straughn et al's No. 1 Kaiser, 1,930 ft. from N and 1,390 ft. from W, Sec. 69, H. Cooper Sur. .....Drlg. 486 ft.; show oil 460 ft.

JONES COUNTY

Abers et al's No. 1 Burton, 150 ft. from S and 175 ft. from E of 43.4-ac. tract in G. Martinez Sur. .....S.D. 1,005 ft.; temp. abnd.
Condor Pet. Co.'s No. 1 Sayles, 650 ft. from N and 300 ft. from W, Sec. 3, Blk. 20, T.&P. Sur. .....Rigging up.
Croft et al's No. 2 Swann, 4,350 ft. from S and 1,700 ft. from E. I. Miley Sur. No. 280 .....Rigging up.
Dyer's No. 1 Odom, 200 ft. from S and 170 ft. from W of N 320 acres, G. Zumwalt Sur. .....Location.
Johnson's No. 1 Huddleston, 165 ft. from S and W of N half of N half of Sec. 39, Blk. 18, T.&P. Sur. .....Fishing 1,520 ft.
Pope & Anderson's No. 2 Swann, 3,050 ft. from S and 1,120 ft. from E of I. Miley Sur. .....Drlg. 1,810 ft.
Smart & Reynold's No. 1 Reynolds, 2,500 ft. from N and 150 ft. from W, Sec. 2, W. T. Scott Sur. No. 3...S.D. 735 ft.
C. S. Spelling et al's No. 1 Lillie, 200 ft. from N and W Sec. 4, E. Miller Sur. No. 2 .....S.D. 2,030 ft.
Southern Oil Co.'s No. 1 Swann, 1,000 ft. from E and 900 ft. from S. of I. Miley Sur. .....Rig.
Young et al's No. 1 Harrell, 150 ft. from S and E of N half of Sec. 8, O.A.L. Sur. .....Location.

LOVING COUNTY

Adams et al's No. 1 Reagan-McElvain, 2,310 ft. from NW and 1,650 ft. from NE Sec. 84, Blk. 1, W.&N.W. Sur. .....Drlg. 2,270 ft.
Columbia Oil & Gas Co.'s No. 2 Wheat, 2,310 ft. from NW and 330 ft. from SW Sec. 85, Blk. 1, W.&N.W. Sur. .....Drlg. 3,178 ft.
Eppenauer Drlg. Co.'s No. 1 Victor, 2,310 ft. from NE and 330 ft. from SE Sec. 4, Blk. 2, W.&N.W. Sur.....S.D. 4,125 ft.
Goldman et al's No. 1 Allen, 330 ft. from NE and NW of Sec. 90, Blk. 1, W.&N.W. Sur. .....S.D. 3,308 ft.

Goldman et al's No. 2 Allen, 330 ft. from NW, 2,310 ft. from SW, Sec. 90, Blk. 1, W.&N.W. Sur. ..... Shut down.
Goldman et al's No. 1 Reagan-McElvain, 330 ft. from NE, 2,310 ft. from NW, Sec. 84, Blk. 1, W.&N.W. Sur.. Shut down.
Lewis & Siegel's No. 1 Johnson, 330 ft. from N and 1,650 ft. from W, Sec. 6, Blk. 56, Twp. 1, T.&P. Sur... S.D. 2,280 ft.
Martin et al's No. 1 Wheat, 990 ft. from SW and SE, Sec. 82, Blk. 1, W.&N.W. Sur. ..... S.D. 2,225 ft.
Martin's No. 2 Freels, 4,175 ft. from NE and 412 ft. from NW, Sec. 92, Blk. 1, W.&N.W. Sur. ..... Spudded and S.D.
Miller et al's No. 1 Ferguson, 990 ft. from NE of Sec. 44, Blk. 29 ..... Spudded and S.D.
Thomas' No. 1 Wheat, 2,310 ft. from NW, 990 ft. from NE, Sec. 83, Blk. 1, W.&N.W. Sur. ..... S.D. 3,970 ft.
Trinity Drlg. Co.'s No. 1 Wheat, 2,310 ft. from SW, 330 ft. from SE, Sec. 3, Blk. 2, W.&N.W. Sur. ..... S.D. 1,300 ft.

MENARD COUNTY

Priest's No. 1 Sorrel, 1,000 ft. from E and 200 ft. from S cor., Sec. 132, E.L.R.R. Sur. ..... S.D. 2,860 ft.

PECOS COUNTY

Aero Oil & Gas Co.'s No. 3 Byrne, 2,430 ft. from NW and 1,485 ft. from SW, Sec. 54, Blk. 10, H.&G.N. Sur... Drlg. 1,427 ft.
Cardinal Oil Co.'s No. 3-G Tippett, 660 ft. from S and 330 ft. from E of No. 2 Tippett, Sec. 61, Blk. 194, G.C.&S.F. Sur. ..... Location.
Corvette Oil Corp.'s No. 8 H. Monroe, 1,040 ft. from E line and 150 ft. from N line of Sec. 39, G.C.&S.F. Sur., Blk. 194 ..... Location.
Kane Prod. Co.'s No. 1 Pecos Valley, 330 ft. from NW and 1,650 ft. from SW, Sec. 34, Blk. 3, E.&T.C. Sur... S.D. 540 ft.
Massey's No. 1 Iowa Realty Trust, 150 ft. from NE and 1,483 ft. from NW, Sec. 21, Blk. 10, H.&G.N. Sur. .... Location.
Messinger et al's No. 1 Jones, 1,200 ft. from NW, 1,290 ft. from SW, Sec. 5, Blk. 9, H.&G.N. Sur. ..... S.D. 250 ft.
Winfield et al's No. 1 Eaton, 1,170 ft. from NE and 2,490 ft. from SE, Sec. 35, Blk. 3, H.&T.C. Sur. ..... Location.

PRESIDIO COUNTY

Sadler et al's No. 1 Bledsoe, 2,640 ft. from N and W Sec. 15, Blk. 354, G.C.&S.F. Sur. ..... S.D. 328 ft.

REAGAN COUNTY

Big Lake Oil Co.'s No. 7-C University, 1,570 ft. from W and 725 ft. from S, Sec. 25, Blk. 9 ..... T.D. 8,825 ft.; producing.
Big Lake Oil Co.'s No. 8-C University, 710 ft. from S and 2,410 ft. from E, Sec. 12, Blk. 2 ..... Drlg. 3,722 ft.
Big Lake Oil Co.'s No. 9-C University, 2,410 ft. from N and 765 ft. from E, Sec. 12, Blk. 2 ..... Drlg. 1,865 ft.
Big Lake Oil Co.'s No. 181 University, 1,700 ft. from S and 2,000 ft. from W, Sec. 10, Blk. 2 ..... Drlg. 2,466 ft.
Continental Oil Co.'s No. 6-B University, 765 ft. from N and 1,980 ft. from W, Sec. 36, Blk. 9 ..... T.D. 3,188 ft.; drlg. by pipe.
Group Oil Corp.'s No. 5-B University, 2,700 ft. from S and 1,775 ft. from W, Sec. 36, Blk. 9 ..... Drlg. 8,510 ft.

REEVES COUNTY

McDorman et al's No. 1 Ray Roberts et al, 2,310 ft. from S and E lines of Sec. 22, Blk. 59, P.S.L. Sur.... S.D. 2,025 ft.
Southern Star Oil Co.'s No. 1 Wright, 1,330 ft. from S and W, Sec. 58, Cassel's Sur. ..... S.D. 250 ft.

RUNNELS COUNTY

Blue Bonnett Oil Co.'s No. 1 Macmillan, 1,368 ft. from N and 660 ft. from W, Sec. 22, N. Travis Sur. ..... T.D. 2,522 ft.; T.P. 2,520 ft.; flowing 80 bbls. daily.
Dutton et al's No. 1 Dean, 5,475 ft. from NE and 1,048 ft. from NW in J. Heil Sur. No. 519 ..... S.O. 3,417-20 ft.; S.D. 3,600 ft.

SCHLEICHER COUNTY

Eastland Oil Co.'s No. 1 Joe Tisdale, C Sec. 29, Blk. M, G.H.&S.A. Sur. ..... T.D. 5,410 ft.
Wesner et al's No. 1 Nicks, 2,310 ft. from N and 2,302 ft. from E of Sec. 77, Blk. LL, T.C. Sur. ..... S.D. 5,580 ft.
George Wilson's No. 1 Page, Sec. 40, Blk. L, 1,290 ft. from N, 1,570 ft. from W, G.H.&S.A. Sur. ..... S.D. 5,053 ft.

SCURRY COUNTY

G. E. Dickman et al's No. 1 F. C. Davis, 1,000 ft. N and 1,770 ft. W of SE cor. of Sec. 275, Blk. 2, H.&T.C. Sur. ..... S.D. 5,100 ft.
Heinzleman et al's No. 1 Hood, 436 ft. from N and 489 ft. from E, Sec. 87, Blk. 3, H.&T.C. Sur. ..... Drlg. 515 ft.
Scurry County Oil Exchange's No. 1 Earnest, 2,310 ft. from N and W, Sec. 68, Blk. 3, H.&G.N. Sur. ..... Spudded and S.D.
Seifert & Dibble's No. 1 T. M. Blackburn, 2,310 ft. from N and 2,310 ft. from W line of Sec. 153, Blk. 97, H.&T.C. Sur. ..... S.D. 4,992 ft.

TAYLOR COUNTY

Urban's No. 1 Blair, 1,500 ft. from S and 150 ft. from W of NE 198 varas Guadalupe County School Lands, Lot 21 ..... Location.

TERRELL COUNTY

Big Bend Oil Co.'s No. 1 Bassett, C NW Sec. 155, Blk. D, M-K-T Sur. ..... S.D. 2,269 ft.
Keck Pecos Trust Co.'s No. 1 Hamilton, C Sec. 6, Georgetown Ry. Sur. ..... S.D. 3,150 ft.; moved off tools.
McPhee-Briggs' No. 1 Kern, 330 ft. from S and W, Sec. 15, Blk. D-5, M-K-T Sur. ..... S.D. 500 ft.
Miller Bros.' No. 1 Allison & Burke, C NW Sec. 10, Blk. 176, T.&P. Sur. ..... S.D. 120 ft.
Mid-Kansas Oil & Gas Co.'s No. 1 Goode, 2,152 ft. from E and 330 ft. from S. Sec. 26, Blk. 161, G.C.&S.F. Sur.. S.D. 6,120 ft.
Jones et al's No. 1 Tankenham, C SE NW Sec. 43, Blk. B-2, C.C.S.D.&R.G.N.G. Sur. ..... S.D. 2,545 ft.
Sides et al's No. 1 Phelps, 2,157 ft. from N and 2,482 ft. from W, Sec. 5, G. W. Hurley Sur. ..... S.D. 3,525 ft.

TOM GREEN COUNTY

Belding & Dutton's No. 1 Norsworthy, 1,640 ft. from S and 587 ft. from E of John McNeese Sur. ..... S.D. 760 ft.; S.O. and gas 725 ft.
Mintex Oil Co.'s No. 1 Campbell Est., 446 ft. from S and 630 ft. from W of Sec. 180, Dist. No. 11, S.P. Sur. .... S.D. 1,994 ft.
Pratt & Hancock's No. 2 Lewis, 100 ft. N and 330 ft. E of most northerly SW cor. of Joshua S. Grant Sur. No. 2 ..... S.D. 200 ft.

UPTON COUNTY

Clark-Cooper's No. 1 Lane, 2,310 ft. from N and 990 ft. from E, Sec. 36, Blk. 1, M-K-T Sur. ..... S.D. 2,270 ft.; 1,800 ft. oil in hole.
White's No. 1 Lane, 2,310 ft. from S and 990 ft. from E Sec. 36, Blk. 1, M-K-T Sur. ..... S.D. 2,355 ft.

VAL VERDE COUNTY

Couch et al's No. 1 J. P. Yoas, 1,300 ft. from the N line and E line of Sec. 31, Blk. 1, I.&G.N. Sur. ..... S.D. 400 ft.
O. O. Owens' No. 1 Mills, Sec. 128, Blk. 1, I.&G.N. Sur., elev. 2,130 ft. ..... S.D. 6,780 ft.

WARD COUNTY

A'ell Bros.' No. 4 Smith, 990 ft. from SE and 285 ft. from NE of C of Sec. 4, Blk. 34, H.&T.C. Sur. ..... T.D. 1,025 ft.; underreaming csg.
Abell Bros.' No. 1 Hayzlett, 1,650 ft. from NW and 1,320 ft. from SW, Sec. 13, Blk. 5, H.&T.C. Sur. ..... Drlg. 310 ft.
Atlantic Oil Prod. Co.'s No. 2 Barrow, 1,650 ft. from NE and 330 ft. from NW, Sec. 23, Blk. 5, H.&T.C. Sur.... S.D. 2,526 ft.; cleaning out; 300 ft. oil in hole.
Atlantic Oil Prod. Co.'s No. 1 Blank-Camp, 1,320 ft. from NW and SW Sec. 14, Blk. 34, H.&T.C. Sur. ..... S.D. 705 ft.
Barnsdall Oil Co.'s No. 3 Henry, 330 ft. from NE and 1,650 ft. from SE, Sec. 28, Blk. 29 ..... T.D. 912 ft.; running 8¼-in. csg.
Bentley et al's No. 1 Carson, 1,650 ft. from NE and SE Sec. 26, Blk. 5, H.&T.C. Sur. ..... Rigging up.
Bradford's No. 1 Carson, 1,650 ft. from SE and 990 ft. from NE Sec. 26 ..... Rigged up and S.D.
Bundy et al's No. 1 Bennett, 2,310 ft. from NW and SW Sec. 16, Blk. 34, H.&T.C. Sur. ..... Drlg. 827 ft.
Caprito et al's No. 1 Beatty, 330 ft. from SW and 990 ft. from SE, Sec. 3, Blk. 34, H.&T.C. Sur. ..... S.D. 2,500 ft.; tools moved off.
Eastland Oil Co. et al's No. 1 Grimes, 445 ft. from NE and 1,320 ft. from SE Sec. 14, Blk. 34, H.&T.C. Sur.... Location.
Eastland Oil Co.'s No. 2 Weiss, 954 ft. from NW and 284 ft. from NE of Sec. 4, Blk. 34 ..... Drlg. 286 ft.
Eppenauer's No. 1 Purcell, 365 ft. from SW and 1,650 ft. from SE of Sec. 17, Blk. 14, H.&T.C. Sur. ..... T.D. 2,740 ft.
Gerber O. & G. Co.'s No. 1 Stubbs, 330 ft. from S, 990 ft. from W, Sec. 9, Blk. 3, B.&B. Sur. ..... Cellar.
H. V. Greer's No. 1 Carr, 150 ft. from NW and 510 ft. from SW, Sec. 12, Blk. 5, H.&T.C. Sur. ..... S.D. 2,223 ft.
Gulf Prod. Co.'s No. 13 Hutchings, 3,347 ft. from N and 330 ft. from E, Sec. 5, Blk. F ..... T.D. 2,575 ft.; straightreaming.
Gulf Prod. Co.'s No. 14 Hutchings, 330 ft. from N and W of Sec. 9, Blk. O ..... Spudding.
Gulf Prod. Co.'s No. 23 O'Brien, 330 ft. from N and 990 ft. from E Sec. 18, Blk. F ..... Drlg. 660 ft.
Gulf Prod. Co.'s No. 24 O'Brien, 330 ft. from N and 990 ft. from W, Sec. 19, Blk. F ..... Drlg. 420 ft.
Gulf Prod. Co.'s No. 25 O'Brien, 330 ft. from N and W Sec. 20, Blk. F ..... Dldg. derrick.
Kregle et al's No. 1 Reasler, 3,062 ft. from SE, 330 ft. from NE, Sec. 46, Blk. 34, H.&T.C. Sur. ..... Drlg. 2,060 ft.
Leidecker et al's No. 2 Bennett, 2,310 ft. from NW and 1,650 ft. from NE, Sec. 16, Blk. 34 ..... Drlg. 2,410 ft.
Maxwell's No. 1 Brillhart, 2,310 ft. from NE and SE Sec. 13, Blk. 34, H.&T.C. Sur. ..... S.D. 2,515 ft.; flowing 95 bbls. day.
R. F. Owen's No. 1 Lee, 1,344 ft. from NW and 4,632 ft. from SW, Sec. 1, J. Howe Sur. ..... S.D. 2,650 ft.
Penn Oil Co.'s No. 1 York, 2,310 ft. from NW and SW Sec. 10, Blk. 34, H.&T.C. Sur. ..... S.D. 2,455 ft.; 90 bbls. day.
Penn Oil Co.'s No. 1 Hardage-Wilson, 330 ft. from NE and SE Sec. 11, Blk. 34, H.&T.C. Sur. ..... Shut down.
Rector Oil Co.'s No. 1 Monroe, 660 ft. from NE and SE, Sec. 62, Blk. 33, H.&T.C. Sur. ..... S.D. 2,150 ft.
Rixford-Fuglarr's No. 1 London, 660 ft. NW, 330 ft. NE E cor. Sec. 10, Blk. 32, H.&T.C. Sur., but in Sec. 8 ..... S.D. 2,291 ft.
Stanolind Oil & Gas Co.'s No. 2 Weiss, 330 ft. from SW and 1,810 ft. from SE, Sec. 4, Blk. 34, H.&T.C. Sur... S.D. 2,375 ft.; 45 bbls. in 2 hrs. through tu ing.
Stanolind Oil & Gas Co.'s No. 3 Weiss, 1,118 ft. from SW and 1,810 ft. from SE Sec. 4, Blk. 34, H.&T.C. Sur.... T.D. 2,386 ft.
Stanolind Oil & Gas Co.'s No. 1 Grimes, 1,485 ft. from NE and 2,112 ft. from SE, Sec. 14, Blk. 34 ..... Drlg. 2,300 ft.
Sturm et al's No. 4 Jones, 2,310 ft. from SW and 990 ft. from SE Sec. 25, Blk. B-29, P.S.L. Sur. ..... Drlg. 1,015 ft.
T. P. Coal & Oil Co.'s No. 5 James, 330 ft. from NE and 1,810 ft. from SE Sec. 5, Blk. 34, H.&T.C. Sur. ..... Drlg. 2,252 ft.
Thompson's No. 1 Johnson, 2,310 ft. from SW and 330 ft. from NW, Sec. 9, Blk. 34, H.&T.C. Sur. .. .. Drlg. 2,267 ft.
Weekly Oil Corp. and L. E. Hultz' No. 1 Burks, 330 ft. from SE and 1,380 ft. from SW, Sec. 26, Blk. B-29, P.S.L. Sur. ..... T.D. 2,618 ft.; plugging back to shut off water 2,607-18 ft.
Zoch et al's No. 1 Brillhart, 2,310 ft. from SE and SW, Sec. 13, Blk. 34, H.&T.C. Sur. ..... Spudding.

WINKLER COUNTY

Richardson et al's Scarborough, 990 ft. from N and W Sec. 1, Blk. 77 ..... Drlg. 220 ft.
Richardson et al's No. 1 Scarborough, 990 ft. from N and 1,650 ft. from W, Sec. 1, Blk. 77 ..... Drlg. 746 ft.
Sid Richardson et al's No. 2 Sealy estate, 1,650 ft. from S and 330 ft. from W, Sec. 94, Blk. A, G.M.M.B.&A. Sur. ..... T.D. 2,401 ft.; running 6⅝-in. csg.
Richardson et al's No. 2 Scarborough, 1,980 ft. from N and 660 ft. from E, Sec. 1, Blk. 77, P.S.L. Sur. ..... Drlg. 2,520 ft.

Wildcat Operations in Texas Panhandle

Week Ending November 7

CARSON COUNTY

Company, well, farm name, section and block— Remarks:

Gulf Prod. Co.'s No. 6 Cooper, 330 ft. from N and W SW, Sec. 4, Blk. 9, I.&G.N. Sur. ..... Drlg. 2,350 ft.
H. A. M. Oil Co.'s No. 3 Cooper, 990 ft. from S, 330 ft. from W of E half NE, Sec. 5, Blk. 9, I.&G.N. Sur.... Drlg. 1,155 ft.
Osborne's No. 1 Byrum, 330 ft. from N and E. N½ NW, Sec. 188, Blk. 3, I.&G.N. Sur. ..... T.P. 3,081 ft.; T.D. 3,263 ft.; plugged back to 3,254 ft.; to shoot.
Sinclair Prairie Oil Co.'s No. 1 Cooper, 330 ft. from S and W, Sec. 4, Blk. 9, I.&G.N. Sur. ..... Drlg. 2,452 ft.
Skelly Oil Co.'s No. 20 W. Schaffer, 1,320 ft. from S and E, Sec. 87, Blk. 4, I.&G.N. Sur. ..... Drlg. 2,478 ft.
Skelly Oil Co.'s No. 21 West Schaeffer, 1,320 ft. N and E, Sec. 68, Blk. 4, I.&G.N. Sur. ..... Spudded.
Skelly Oil Co.'s No. 14 W. Schaffer, 330 ft. S and W, Sec. 191, Blk. 3, I.&G.N. Sur. ..... Location.
Stubblefield-Shell's No. 3 Cooper, 330 ft. from N and 330 ft. from E of SE, Sec. 5, Blk. 9, I.&G.N. Sur. .... Cellar.
Texoma Nat. Gas Co.'s No. 1-T Urbanczyk, center SE, Sec. 25, Blk. 4, I.&G.N. Sur. ..... Drlg. 2,448 ft.
Texoma Nat. Gas Co.'s No. 1-G Urbanczyk, 1,333 ft. S, 2,653 ft. E S half, Sec. 19, Blk. 4, I.&G.N. Sur. ..... Rigging up rotary.
The Texas Co.'s No. 1 Byrum, 330 ft. from N and W, S half NW, Sec. 188, Blk. 3, I.&G.N. Sur. ..... T.D. 3,252 ft.; T.P. 3,105 ft.; 150 bbls. in 11 hrs.
Union Pet. Co.'s No. 3 Cooper, 330 ft. N, 310 ft. E SE, Sec. 5, Blk. 9, I.&G.N. Sur. ..... Cellar.

CHILDRESS COUNTY

Robertson's No. 1 Biddy, center S 26½ acres of N, Laughlin Sur. Blk. T ..... Rig.

COLLINGSWORTH COUNTY

Cochran Bros.' No. 1 Atkinson, 660 ft. from N and E, Sec. 26, Blk. 21, H.&G.N. Sur. ..... Spudded.
Kates et al's No. 1 Hickman, center NE, Sec. 43, Blk. 10, H.&G.N. Sur. ..... S.D. 1,750 ft.
Kates et al's No. 1 Bell, 200 ft. from N, 2,310 ft. from W, Sec. 21, Blk. 102, H.&G.N. Sur. ..... S.D. 1,340 ft.; elevation 1,910 ft.

COTTLE COUNTY

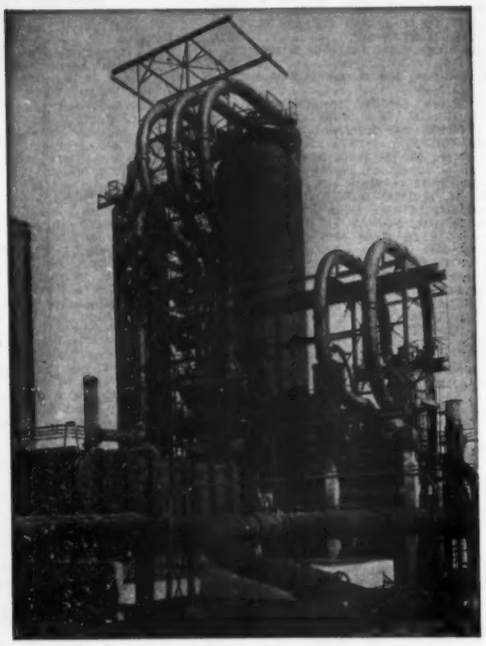
Darby Pet. Co. et al's No. 1 Puersil, 330 ft. from N, 1,320 ft. from E, Sec. 40, Blk. B, John H. Stevens Sur. ..... T.D. 3,860 ft.; underreaming 8-in. csg.

DEAF SMITH COUNTY

Western Union Oil Co.'s No. 1 Farwell, C NW, Sec. 18-3n-2e ..... S.D. 1,240 ft.

GRAY COUNTY

Back & Barber's No. 1 Back, 660 ft. from S, 330 ft. from W, Sec. 140, Blk. 25, H.&G.N. Sur. ..... S.D. 2,428 ft.
Baldridge et al's No. 1 Melton, 330 ft. from NE E half NE, Sec. 95, Blk. B-2, H.&G.N. Sur. ..... T.D. 2,300 ft.; underreaming 8-in. csg.
Baldridge et al's No. 1 Catlin, 330 ft. S and E of E 80 of 158-ac. tract, Sec. 57, Blk. 3, I.&G.N. Sur. ..... Rig on ground.
Bell O. & G. Co.'s No. 2 Tedesco Webb, 330 ft. S and W, Sec. 61, Blk. 25, H.&G.N. Sur. ..... Location.
Boyes et al's No. 1 Colebank-Morse, 330 ft. NE, Sec. 65, Blk. 25, H.&G.N. Sur. ..... S.D. 2,554 ft.; shot. 50 qts.; no results.
Christy's No. 1 Gethings, 330 ft. from N and E, Sec. 13, Blk. A-9, H.&G.N. Sur. ..... Spudded.
Dixon Creek Oil Co.'s No. 1 Chapman, 330 ft. from S and W, Sec. 69, Blk. 25, H.&G.N. Sur. ..... Show oil 2,712 ft.; T.D. 2,775 ft.; swbg. 25 bbls. in 10 hrs.
Dolomite Prod. Co.'s No. 1 Sailor, 330 ft. N and E, Sec. 111, Blk. 3, I.&G.N. Sur. ..... Cellar.



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GULF

MODERN METHODS

MAKE MODERN

GULF PRODUCTS

Paraffine and Coastal Crudes

Gasoline — Lubricating Oils

Naphtha — Gas — Oils

Wax — Petroleum Coke

Cylinder — Engine — Cordage

GULF REFINING COMPANY

General Sales Offices: Pittsburgh, Pa.

Gerber O. & G. Co.'s No. 1 Stubbs, 330 ft. from S, 990 ft. from W, Sec. 9, Blk. 3, B.&B. Sur. ..... Moving in rig.
Graham-Crue Hoover's No. 1 Barrett, 330 ft. from S and W, Sec. 130, Blk. 3, I.&G.N. Sur. ..... Drlg. 2,820 ft.; show gas 2,780 ft.
Gray County Prod. Co.'s No. 1 Huselby, 330 ft. from S and W, E½ NW, Sec. 55, Blk. 25, H.&G.N. Sur. ..... Location.
Kewanee O. & G. Co.'s No. 1-F Morse, 330 ft. from S and W, Sec. 3, Blk. 26 ..... Show gas 2,350 ft.; S.D. 2,660 ft.
R. H. Locke's No. 1 McKnight, 1,320 ft. N and W, Sec. 178, Blk. B-2, H.&G.N. Sur. ..... Location.
Magnolia Pet. Co.'s No. 6 fee, 660 ft. from S and W, Sec. 14, Blk. 3, I.&G.N. Sur. ..... Fishing 4,050 ft.
Magnolia Pet. Co.'s No. 7 fee, 660 ft. N and W SW, Sec. 14, Blk. 3, I.&G.N. Sur. ..... Drlg. 1,990 ft.
Mazda-Shell Pet. Corp.'s No. 3 Combs-Worley, 330 ft. from N and W NE, Sec. 35, Blk. 3, I.&G.N. Sur. ..... Bldg. derrick.
Mid-Kansas O. & G. Co.'s No. 2 Webb, 990 ft. from N, 330 ft. from W NE, Sec. 61, Blk. 25, H.&G.N. Sur.... Drlg. 1,425 ft.
Nabob Oil Co.'s No. 1-E Morse, 330 ft. from S and W, W½ SE, Sec. 67, Blk. 25, H.&G.N. Sur. ..... Plugged back to 2,635 ft.; may abnd.
Ochiltree et al's No. 1 Hughey, 360 ft. S, 330 ft. E E half SE, Sec. 129, Blk. 3, I.&G.N. Sur. ..... Cellar.
Parton & Holt's No. 2 Morse, 330 ft. from W, 250 ft. from N, W½ SW, Sec. 5, Blk. 26, H.&G.N. Sur. ..... S.D. 2,635 ft.
Parton Holt's No. 3 Morse, 660 ft. from N and E of E half SW, Sec. 5, Blk. 26, H.&G.N. Sur. ..... Drlg. 2,468 ft.
Pulse-Shell's No. 1 Brown, 290 ft. from N, 250 ft. from E of NW, Sec. 128, Blk. 3, I.&G.N. Sur. ..... T.D. 2,563 ft.; underreaming 8-in. csg.
Quicksand Oil Co.'s No. 2 Chapman, 165 ft. N, 775 ft. from E of W 60 ac. of N½ NW, Sec. 69, Blk. 25, H.&G.N. Sur. ..... Rig.
Richardson's No. 1 Wright, 330 ft. from S and W, Sec. 12, Blk. 3, I.&G.N. Sur. ..... T.D. 2,750 ft.; standardizing.
Saunders et al's No. 2 Sullivan, 822 ft. from W, 231 ft. from NE, 160 ft. S, 264 ac. of N½, Sec. 136, Blk. 3, I.&G.N. Sur. ..... Will plug back to 3,275 ft. and shoot.
Skelly Oil Co.'s No. 3 South Jackson, 330 ft. from N, 990 ft. from E, Sec. 88, Blk. B-2 ..... T.D. 2,970 ft.; standardizing.
Skelly Oil Co.'s No. 7 Saunders, 330 ft. from N, 360 ft. from W, Sec. 4, Blk. 1, A.C.H.&B. Sur. ..... Drlg. 2,582 ft.; 15,000,000 ft. gas 2,542 ft.
Skelly Oil Co.'s No. 8 Saunders, 990 ft. S, 1,200 ft. from W, Sec. 4, Blk. 1, A.C.H.&B. Sur. ..... Drlg. 415 ft.
Tarber's No. 1 Saunders, 330 ft. N and W, Sec. 3, Blk. 1, B.B.&S.F. Sur. ..... Drlg. 1,835 ft.; underreaming 8-in. csg.
Tedesco-Bell O. & G. Co.'s No. 3 Morse, 330 ft. from N and W N half SE, Sec. 1, Blk. 26, H.&G.N. Sur. ..... Drlg. 945 ft.
The Texas Co.'s No. 6 Davis, 1,610 ft. from 1,320 ft. from E, Sec. 8, Blk. 1, A.C.H.&B. Sur. ..... Drlg. 1,110 ft.
The Texas Co.'s No. 2 Frashier, 997 ft. N, 1,323 ft. from E, Sec. 162, Blk. 3, I.&G.N. Sur. ..... Drlg. 1,525 ft.
The Texas Co.'s No. 5 Shaw, 330 ft. from S and E, E half, Sec. 5, Blk. 1, A.C.H.&B. Sur. ..... Drlg. 2,515 ft.
The Texas Co.'s No. 1 Pope, 330 ft. from N and E of W half SE, Sec. 173, Blk. 3, I.&G.N. Sur. ..... T.D. 3,050 ft.; swedging pipe.
The Texas Co.'s No. 22 Saunders, 300 ft. S, 330 ft. from W SE, Sec. 4, Blk. 1, A.C.H.&B. Sur. ..... Drlg. 2,025 ft.
The Texas Co.'s No. 13 Williams, 300 ft. N, 330 ft. W NE, Sec. 7, Blk. 1, A.C.H.&B. Sur. ..... Drlg. 2,360 ft.
The Texas Co.'s No. 14 Williams, 330 ft. N, 370 ft. W, Sec. 7, Blk. 1, A.C.H.&B. ..... Drlg. 368 ft.
Sam Travis' No. 1 Back, 330 ft. S and E E half NE, Sec. 44, Blk. 25, H.&G.N. Sur. ..... Cellar.
Trippiehorn Bros.' No. 1 Lovett, 330 ft. from N and W, Sec. 57, Blk. B-2, H.&G.N. Sur. ..... T.D. 3,157 ft.; swabbed 75 bbls. in 12 hrs.
Weltzel Oil Co.'s No. 2 Morse, 330 ft. from S and E of N half NW, Sec. 67, Blk. 25, A.&G.N. Sur. ..... Drlg. 2,275 ft.

HEMPHILL COUNTY

Hoover's No. 1 Hoover, 350 ft. from N, 1,200 ft. from E, G. S. Hood Sur. ..... S.D. 5,165 ft.

HUTCHINSON COUNTY

Alexander's No. 1 Cockrell, 330 ft. N and E of E 80 of S 160, Sec. 3, Blk. M-2, T.C. Sur. ..... Rig on ground.
Baso's No. 1 Moore, 330 ft. from S, 330 ft. from E, in 80 ac. in NW, Sec. 21, Blk. M-21, T.C.R.R. Sur. ..... T.D. 3,080 ft.; est. 5 or 10 b'ls. may plug.
Danciger O. & R. Co.'s No. 1 Johnson, 330 ft. N and W, SE, Sec. 34, Blk. Y, A.&B. Sur. ..... Spudded and S.D.
Deal O. & G. Co.'s No. 2 Sanford, 330 ft. N and E of N 80 ac., S 160 ac., Sec. 81, Blk. 46, H.&T.C. Sur..... S.D. 450 ft.
Holmes & Newblock's No. 2 Moore-Langdon, 330 ft. from N and W, Sec. 125, Blk. 4, I.&G.N. Sur. ..... S.D. for repairs 2,947 ft.
Huber Pet. Co.'s No. 2 Christian, 330 ft. from S and E, SW, Sec. 33, Blk. Y, A.&B. Sur. ..... T.D. 2,170 ft.; underreaming 10-in. csg.
Huber Pet. Co.'s No. 1 Mover-Johnson, 990 ft. from N, 330 ft. from E half SW, Sec. 34, Blk. Y, A.&B. Sur. ..... Drlg. 2,775 ft.; carrying pipe.
Huber Pet. Co.'s No. 1 Works, 2,530 ft. S, 660 ft. E, Sec. 7, Blk. Y-2, T.T. Sur. ..... Cellar.
Liner Drlg. Co.'s No. 1-D Johnson, 330 ft. from N and E, Sec. 6, Blk. 1, B.&B. Sur. ..... Plugged back to 3,146 ft.; S.D.
Joe Murphy's No. 1 Watkins, 440 ft. from N and W of N half, Sec. 13, Blk. M-21 ..... Drlg. 2,310 ft.
Oates & Morrow's No. 2 Starnes, 1,400 ft. from S, 680 ft. from E, Sec. 24, Blk. M-23, T.C.R.R. Sur. ..... S.D. 3,190 ft.; estm. 10 bbls.
Pharis Oil Co.'s No. 5 Smith, 660 ft. from N and W, SW, Sec. 14, Blk. Y, M.&C. Sur. ..... Shut down.
Stansylvania Oil Co.'s No. 3 Stansbury, 236 ft. from S, 1,264 ft. from W, Sec. 129, Blk. Z, E.L.&R.R. Sur..... T.D. 3,035 ft.; T.P. 2,975 ft.; estm. 50 bbls.
Steckol Prod. Co.'s No. 2-D Whittenburg, 1,065 ft. from S and W, Sec. 38, Blk. M-23, T.C. Sur. ..... Cellar.
Texilvania Oil Co.'s No. 1 Haile, 330 ft. S, 280 ft. W, Sec. 16, Blk. 1, E.L.R.R. Sur. ..... Rig.
Timms-Deatch's No. 4 Moore, 330 ft. N and W, Sec. 124, Blk. 4, I.&G.N. Sur. ..... T.P. 3,023 ft.; T.D. 3,076 ft.; fsg.

LIPSCOMB COUNTY

Okla. Public Service Co.'s No. 1 C. W. Jones, NE SW, Sec. 100, H.&T.C. Sur. ..... T.D. 5,003 ft.

MOORE COUNTY

Dogie Oil Co.'s No. 1 Greenwald, 330 ft. from N and W, Sec. 277, Blk. 44, H.&T.C. Sur. ..... Drlg. 1,437 ft.
Shamrock Oil & Gas Co.'s No. 2 Brumley, 330 ft. from N and W, Sec. 360, Blk. 44, H.&T.C. Sur. ..... Fishing 3,000 ft.
Shamrock Oil & Gas Co.'s No. 1 Burnett, 660 ft. from S, 330 ft. from W, Sec. 359, Blk. 44, H.&T.C. Sur. ... Drlg. 2,500 ft.

MOTLEY COUNTY

Matador Oil Corp.'s No. 1 Owens, C NE, Sec. 10, Blk. G, B.&B. Sur. ..... S.D. 530 ft.

OLDHAM COUNTY

Amalgamated German-American Oil Corp.'s No. 1 Norton, 330 ft. S and E, Sec. 12, T.&N.O. Sur. ..... S.D. 400 ft.
Chambers et al's No. 1 Herring, CNL, Sec. 20, Blk. S, G.C.&S.F. Sur. ..... T.D. 4,000 ft.; fishing.

ROBERTS COUNTY

Chicken Creek Oil Co.'s No. 1 Ledrick, 330 ft. N and W, Sec. 55, Blk. C, G.&M. Sur ..... Drlg. 4,810 ft.; carrying 6-in. csg.

WHEELER COUNTY

Delaney et al's No. 1 Sitter, 330 ft. from S and W of E half NE, Sec. 33, Blk. 24 ..... Drlg. 1,710 ft.
Devore & Robinson's No. 1 Sitter, 2,310 ft. from S and E, E½, Sec. 33, Blk. 24, H.&G.N. Sur. ..... T.D. 2,760 ft.; S.D. for pipe line connection.

Louisiana Operators Return to the Consideration of Interesting Trinity Sand Horizon Tests

By D. H. BANCROFT
Staff Correspondent, Louisiana-Arkansas

SHREVEPORT, La., Nov. 7.—The expected completion of Gibson & Johnson's No. 2 Frost Lumber Co., Section 15-9-13, in the new Converse area, northwestern Sabine Parish, Louisiana, did not materialize during the past week. The owners and operators of the well, which looms as a possible 3½-mile extension of the discovery well in that district, are perfecting titles on leases composing their blocks before drilling the 6⅝-inch plug, set at 1,484 feet over a good show of oil encountered from a total depth of 1,516 feet. None of the other wildcats in this division developed anything of interest, but the Zwolle Field had a good week, reporting five producers out of seven completions.

NORTH LOUISIANA

An area in the Zwolle Field, due to intensive work on the eastern and western flanks, will probably see more activity since the completion of E. P. Kilgore's No. 1 Thomas, in Section 30-8-11, an extension of about one-half mile to the north. This immediate vicinity, which is about 3 miles northeast of the discovery well and on the northern edge of production, about midway between the western and eastern extremeties 25 miles apart, has experienced little activity since the southwest Zwolle Pools were uncovered. The Kilgore well is flowing an estimated 1,000 bbls. of pipe line oil daily through seven-sixteenths-inch choke from 2,341 feet. Six-inch casing was set in the test on top of the marl at 2,332 feet. In the extreme northeastern extension, the Magnolia Petroleum Co.'s No. 3 Williams, Section 6-7-10, had a gauged flow of 1,296 bbls. through three-quarters-inch choke from a total depth of 2,502 feet. This well was drilled in record time, having built derrick and begun rigging up on October 19, setting two strings of casing and completing on the last day of October, just 12 days after derrick was built. The other three producers in Zwolle were drilled several weeks ago and have been awaiting standard rig preparatory to putting the well on the pump. Paul L. Miller, trustee's No. 1 Chadick, Section 32-8-10, is pumping 40 bbls. daily from 2,589 feet, and E. F. Neely's No. 1 Rains, Section 14-7-11, is pumping the same amount daily from 2,540 feet. In the original section of the eastern extension, Section 1-7-11, the Ritchie Production Co.'s No. 1 Byrd is pumping 50 bbls. daily from a total depth of 2,465 feet. The two dry holes reported from North Louisiana were both from this area. E. F. Neely's No. 3 Ponder, Section 15-7-11, was abandoned at 2,550 feet, and the Sabine Production Co.'s No. 3 Sabine Lumber Co., Section 3-7-13, was dry and abandoned at 2,450 feet. The one gas well completed in this division was from the Bethany Field, part of which is in Caddo Parish and part in Harrison County, East Texas. The Calatex Oil & Gas Co.'s No. 1 J. M. Agurs, Section 9-16-16, had an initial flow of 7,000,000 feet of gas from 3,004 feet.

Tests of Trinity Horizons

Further interest of North Louisiana operators is being centered on a number of deep tests to the Trinity horizons which have started or are about to start in this district. In the western part of Lincoln Parish, the Loring Oil Co., a Benedum & Trees subsidiary, has set 12½-inch surface casing at 500 feet are driling at 2,400 feet on its No. 1 Simonton, Section 25-20-4w. The test is surrounded by a 10,000-acre block of leases and the contract calls for a 4,300-foot hole. The wildcat is about 8 miles east of the Sugar Creek Field which produces gas with a high gasoline content from Oolitic lime in the upper Trinity around the 4,300-foot level. The Arkansas Natural Gas Co. drilled its No. 1 Lewis, Section 26-20-4w, 1½ miles south of the Loring test, about two years ago, and the results obtained in this well led the operators on the present test to believe that they are located on a definite structure that will produce gas or oil or both from different horizons of the Trinity. Another deep test in this area will be started before January 1, 1933. O. G. Collins has assembled 11,000 acres centering around Section 13-21-5w, with a contract to drill a 4,500-foot test. This test is 10 miles northeast of the Sugar Creek Field and on what many geologists and operators believe to be a better structure. It is reported that the United Gas Public Service Co. has contracted all of the gas rights and one-half of the oil rights on this block and will drill the well. North of the town of Homer, Claiborne Parish, and about 5 miles northeast of the Homer Field which produces from the Nacatoch sand around 1,100 feet, and from the Blossom sand at 2,000 feet, the Leue Oil Co. is making intensive preparations for a deep test. The well is located on the Kinder tract in Section 2-21-7, and was temporarily abandoned last year at 3,323 feet. The 122-foot derrick has been rebuilt and subderrick concrete cellars, reinforced with steel have been completed so that all cuttings from the hole may be thoroughly analyzed. This test is surrounded by a large block of acreage, and will determine whether or not a deeper pay exists in the vicinity of the old prolific Homer Field. A similar test a few miles southwest of the field about two years ago failed to find the Trinity pay.

A deep test south of the Bellevue shallow field in Bossier Parish, on a high structure already producing gas and some oil from Olitic lime in the upper Trinity around 1,800 feet, is expected to make a still deeper test unless a good producer is obtained from the upper horizons. H I. Morgan's No. 2 Smith, Section 22-19-11, is coring at 1,718 feet and the next week's operations will determine whether or not a producer will be made at the previous levels, or the hole deepened to the lower Trinity. This well may be carried to a total depth of 5,000 feet which would reveal much information, geologically, hitherto unrevealed by other deep tests in this district.

Using the Acid Test

A De Soto Parish wildcat, in attempting to make a chalk rock well, is experimenting with a process hitherto untried in this division. Jack Whitson's No. 1 Sanders, Section 19-11-13, encountered a show of oil in the chalk at 1,465 feet after topping the marl at 1,282 feet. Eight-inch casing was set at 1,346 feet and the plug drilled, but when tested, no show in commercial quantity developed. The operator, in an effort to increase the porosity of the chalk, has used 500 gallons of muriatic acid, mixed on a 10 to 1 basis, and forced it into the bottom of the hole. At this writing, it is known that the acid has made quite a chemical change on the chalk, making this formation more porous, but whether or not it will result in a better show of oil remains to be seen when the hole is thoroughly cleaned out. It is known that hydrochloric acid (HCL) is used successfully in some of the gas fields in Michigan to increase the porosity of the producing zones.

The status of other North Louisiana wildcats follows: De Soto Parish, Honeycutt Oil Co.'s No. 1 Porter, Section 26-12-13, coring at 2,510 feet; same parish, on the western border, E. T. Oakes' No. 1 Johnson, Section 30-13-15, coring at 4,300 feet, probably near the top of the Glen Rose in the upper Trinity; Vernon Parish, Llano Co-operative Colony's No. 1 fee, Section 34-2n-9w, drilling in gummy shale at 2,900 feet; George Pearce and others' No. 1 Ambrose, Section 22-20-10, Webster Parish, coring in hard sand at 3,032 feet.

ARKANSAS

Only two counties in this district have shown signs of increased activity recently, Lafayette and Miller. In the former county, Fox & Langford's No. 1 Coleman Brothers, Section 25-16-25, is drilling at 1,590 feet after setting 10-inch casing at 169 feet. McDonald & Carroll's No. 1 Adams, Section 2-19-26, in the same county, has set 10-inch surface casing at 102 feet and is drilling at 1,292 feet. Sam E. Wilson has derrick up on his No. 1 Smith, Section 24-19-25.

In the vicinity of the recently completed Fitzwater well, east of Texarkana in Miller County, there are 10 active operations, either drilling or erecting derricks preparatory to rigging up. The active tests in this area follow: L. W. Dennis' No. 1 Head, Section 20-15-26, set 10-inch at 140 feet and drilling at 1,780 feet; the Duluth-Arkansas Oil Co.'s No. 1 Harold E. Beck, Section 34-15-26, rigging up; Fitzwater and others, moving in rig on No. 2 Beck, Section 33-15-26; same operator, shut down temporarily on No. 1 Norsen, Section 20-15-27, at 1,960 feet; William S. King's No. 1 Beck, Section 35-15-26, coring red shale at 3,142 feet; Charles B. Lenz's No. 1 Dean, Section 19-15-25, drilling at 1,560 feet. Three other tests are rigging up or have set surface casing.

Daily average runs from the North Louisiana-Arkansas Field showed only the usual small fluctuations, North Louisiana pools reporting an increase of 275 bbls. and Arkansas an increase of 20 bbls., runs from the two States totaling 63,595 bbls. compared to 63,300 bbls. the week before. Runs from the several pools were:

NORTH LOUISIANA

	Bbls.
Caddo, light	5,065
Caddo, heavy	1,985
Cotton Valley	700
DeSoto-Red River	1,830
Elm Grove	380
Haynesville	4,115
Holly	230
Homer	2,725
Pleasant Hill	265
Sarepta-Carterville	825
Urania	3,520
Zwolle	7,610
Total	29,250
Last week	29,285
Decrease	35

ARKANSAS

Champagnolle	1,720
El Dorado	2,950
Lisbon	455
Nevada County	900
Smackover, light	2,870
Smackover, heavy	23,640
Stephens	110
Urbana	1,390
Total	34,035
Last week	34,015
Increase	20
Total both states	63,285
Last week	63,300
Decrease	15

Wildcat Operations in Louisiana-Arkansas

(Rotary operations unless otherwise designated)

North Louisiana

AVOYELLES PARISH

Company, well, farm name, section and block— Remarks:

T. J. Woodley, tr.'s No. 1 Thompson & Koltz, 2,640 ft. E, 200 ft. S, NW cor., Sec. 11-2n-5e.....S.D. for D.S. 1,680 ft.

BEAUREGARD PARISH

DeRidder Development Co.'s No. 1 McMahan, 158 ft. S, 160 ft. W NE cor. NW, Sec. 33-2s-9w .....S.D. 1,365 ft.

BIENVILLE PARISH

Black Lake Dev. Co.'s No. 1 Petty Stave Co., NW NW, Sec. 19-18-6w .....S.D. 2,162 ft.

R. S. Ross et al's No. 1 W. M. Beck, NE NE, Sec. 3-18-5..Derrick.

BOSSIER PARISH

Belmont Oil Co.'s No. 1 Edwards, 190 ft. N and E, SW cor. NE, Sec. 12-18-12 .....S.D. 1,106 ft.

Breazelle & Steckoll's No. 1 Nattin, C SW NE, Sec. 15-22-14 .....Set 6-in. 2,967 ft; T.D. 3,018 ft.

A. W. Phillips, tr.'s No. 1 Oden, 300 ft. W, 150 ft. N, SE cor. NW NW, Sec. 4-18-13.....Set 10-in. 96 ft.

CADDO PARISH

Bolinger & Walker's No. 1 Thompson, SE SW, Sec. 16-22-14 .....Derrick pattern.

Caddo-Prairie Dev. Co.'s No. 1 Nichols, 660 ft. N, 400 ft. E, SW cor. NE SW, Sec. 10-22-15..... Drlg. chalk 1,700 ft.

CALDWELL PARISH

Carter Bell's No. 1 Taylor, 150 ft. S, 150 ft. E, NW cor. NE SE, Sec. 17-14-4 .....S.D. 3,712 ft.

CLAIBORNE PARISH

Leue Oil Co.'s No. 1 Kinder, Sec. 2-21-7 .....Rigging up.

Robertson & Aurand's No. 1 Smith, 200 ft. S and E, NW cor. SE NE, Sec. 8-21-7.....S.D. 1,150 ft.

DE SOTO PARISH

Coker et al's No. 1 Boone, 200 ft. N and W, SE cor. SW NW, Sec. 12-10-11 .....S.D. 60 ft.

Donley & Chastain's No. 1 H. Smith, 325 ft. W, 600 ft. N, SE cor., Sec. 31-14-15 .....S.D. 2,470 ft.

Honeycut O. & G. Co.'s No. 1 Porter, 423 ft. S, 414 ft. W, NE cor. NW NE, Sec. 26-12-13.....Coring 2,510 ft.

S. A. Guy's No. 1 Dowling, 469 ft. E, 382 ft. S, NW cor. NE, Sec. 31-14-14 .....Fishing for D.S. 3,068 ft.

Mrs. A. L. Ibach, tr.'s No. 1 Rambin, 250 ft. S and E, NW cor. NE NE, Sec. 32-11-11 .....Derrick.

E. T. Oakes' No. 1 R. H. Bryant et al, 200 ft. N and W, SE cor. NE NW, Sec. 30-13-15.....Coring 4,300 ft.

DeSoto Dev. Co.'s No. 1 Nickey, Sec. 7-13-12.....Partly rigged up and S.D.

(Continued on Page 55)

Kansas Producers Lowering Oil Output to New Allowable in Line With Present Demand

By W. A. SPINNEY
Staff Correspondent, Kansas Fields

The production of Kansas is steadily being reduced to the quantity the purchasers nominated last month, 94,000 bbls. daily until November 20. The State's daily average production for the week ending November 5 was estimated at 95,250 bbls., which is a reduction of approximately 1,000 bbls. daily from the previous week's figures. When the voluntary agreement was made to reduce the State's daily production the average production was over 100,000 bbls. per day.

A new gas pipe line to the Hollow Field in Harvey County was announced during the week by the Kansas Pipe Line & Gas Co. It was planning to start work at once on a 3-inch line to supply fuel for drilling operations. This company purchases all the gas sold from the Haury Pool in Reno County.

Another pipe line is to be constructed in McPherson County from the recently completed well of J. E. Mabee, Inc. and others in Section 33-21-3w, a south extension to the Voshell Pool, to the Shell Petroleum Corp.'s pump station about 3 miles farther south. The new producer is estimated to be a 500-bbl. well. It produces from the Hunton lime. This well opened a new producing horizon in McPherson County and has stimulated development in the district.

Test in Finney County

A wildcat rotary-drilled test in Finney County was spudded on November 1 and was later reported drilling at 550 feet. The test is Joe E. Denham and others' No. 1 Brown, C SW Section 16-25-34w. It is located on a block of 17,600 acres and is expected to be drilled to 3,000 feet, if necessary, but the owners hope to find the gas pay found in the Hugoton gas field before it reaches the 3,000-foot level.

In the new Hunton lime area in McPherson County, J. E. Mabee, Inc., and others' No. 1 Koehn, NW cor. SW NE Section 33-21-3w, was nearing the Hunton lime formation. It was drilling at 3,395 feet. This test is located one location east and two locations north of the discovery well in the Hunton lime area of McPherson County.

If this test makes a commercial producer several other tests will be started in the vicinity. The north offset is owned by the Mid-Kansas Oil & Gas Co. Other acreage in the vicinity is owned by W. C. McBride, Inc., and the Shell Petroleum Corp.

Lario Oil & Gas Co.'s No. 1 Neufeldt, SW cor. NW Section 34-21-3w, is a new location east of the discovery Hunton lime well in the area south of the Voshell Pool in McPherson County. It is located half a mile east and one location north of the discovery well. The test will be drilled with rotary tools. Mid-Kansas Oil & Gas Co.'s No. 1 J. J. Schmidt, SE cor. NW Section 33-21-3w, was spudding. It is two locations north of the discovery well. It is being drilled with cable tools.

The Olsen Oil Co. and others' No. 2 Rudicel, C NW SW Section 24-23-4w, Reno County, is fishing for collapsed casing 400 feet off bottom.

Skelly Oil Co.'s No. 2 Leisman, SW cor., Section 20-27-10w, Kingman County, was rigging up standard tools which will be used to clean out. The well has been making 60 bbls. of oil a day and 9,000,000 feet of gas. The company plans to drill the next test in NW cor., Section 29-20-10w.

An interesting wildcat in Ford County, western Kansas, which is more than a mile deep, was still drilling. The well is Swain and others' No. 1 Henthorn, C NW, Section 21-25-24w. It was last reported at 5,720 feet, in Siliceous lime. The top of the Siliceous lime was found at 5,605 feet. The top of the Wilcox sand was found at 5,505 feet where a showing of oil and gas was reported. At 4,315 feet, it was reported the well had 5,000,000 feet of gas and the owners may plug back to this horizon if it fails to find production at a deeper level. The well was started about three years ago and after being drilled to 5,200 feet it was shut down for a long time. Recently Dodge City people formed a pool, financed the deeper drilling, and leased additional acreage and resumed drilling operations. A string of 3-inch casing was landed in the well around 5,600 feet, but this was pulled out of the hole and after a few feet had been drilled and the hole straight-reamed drilling was continued with larger tools.

Reports for the week ending November 3, showed a total of 14 new operations. Greenwood and McPherson Counties listed a total of five each, while Rice, Kingman, Ness and Ellis each report one new operation.

Three of these new operations are wildcat tests. The York State Oil Co.'s No. 1 Joy, SE cor., Section 11-23-11, in Greenwood County, is a wildcat. The other two are located in the western part of the State on large blocks of leases. Sinclair Prairie Oil Co.'s No. 1 J. Wilhelm is in the C SW SW, Section 16-19-21w, Ness County. It is the only drilling test in the county at this time. The other new operation is Phillips Petroleum Co.'s No. 1 in the C SW, Section 33-11-17w, Ellis County.

Potential Yet Uncertain

So far the owners of the recently completed chat producer in the Hollow Field in Harvey County have been unable to make a production test. The well is Frost, Study & Lloyd's No. 1 Martens, NE cor. SE SE, Section 19-22-3w, which came in unexpectedly from the chat formation. It has been estimated to be a 6,000-bbl. well, but because of the lack of facilities of the purchasing company to move the oil from the lease storage and the lack of sufficient storage on the lease it is impossible to get a correct gauge of the well's potential production.

Phillips Petroleum Co.'s No. 2 Warkentine, NW cor. SW SW, Section 20-22-3w, Harvey County, is a lew location and is a twin to No. 1 Warkentine, which is producing from Hunton lime. No. 2 Warkentine will test the chat. No. 1 Warkentine was drilled with rotary tools.

In Reno County, the Vernon Oil Co.'s No. 1 Tonn, C NW NW, Section 17-25-4w, was drilling deeper to test the Viola lime and the Simpson sand. It was drilling at 3,825 feet at last report. The test is drilling in a white lime which was thicker than expected. It made several hundred barrels of oil from the chat when first completed about three years ago. The last string of casing was landed at 3,728 feet. The well was first completed by Shell Petroleum Corp. and others. It will be one of the few wells drilled to the Viola lime and Simpson sand in southeastern Reno County.

New Potential Tests

The potential tests which are to be taken in the Ritz-Canton-Decker Field in McPherson County November 10 and in the Stratman area of Ellsworth County November 15 will be the first to be taken under the new rules ordered by the Kansas Public Service Commission on October 28. All wells will take a 24-hour potential and be tested as quickly as storage and pipe line facilities permit. All wells will be tested in the manner in which they are normally produced, either by flowing, pumping through not to exceed 3-inch tubing, and using not to exceed 3-inch working barrels and by using not to exceed a 54-inch pumping stroke. Potentials will be determined by taking the total production for the 24-hour period. Only pipe line oil will be considered as production. No allowances will be made for down time during the test. All tanks on leases taking tests must be gauged, thiefed and measured and tested for water at the beginning and at the completion of the test. Owners of all

(Continued on Page 54)

Wildcat Operations in Kansas

(Descriptions are East unless marked otherwise)

BARTON COUNTY

Company, farm and location—	Remarks:
Sinclair Prairie Oil Co.'s No. 1 Turgeon, C NE NW, Sec. 3-16-12w	Rig.
Rankin's No. 1 Sooey, C SW NE Sec. 34-18-12w	Rig.
Doherty et al's No. 1 Roesler, SW NE Sec. 11-18-11w	S.D. 1,975 ft.
Smith et al's No. 1 Wilson, C NW SW Sec. 13-18-14w	Drlg. 2,325 ft.
Skelton Oil Co.'s No. 1 Ott, C SE SE Sec. 16-19-14w	Set liner 3,530-46 ft.; show oil; S.D. 3,605 ft.

BUTLER COUNTY

Cameron-Great Basin Oil Co.'s No. 1 Landon, C SE NW Sec. 13-28-2	Drlg. 3,080 ft.
Ramsey's No. 1 Michael, SW NW NW Sec. 18-27-3	Drlg. 2,842 ft.

COWLEY COUNTY

Roth & Farout's No. 1 Craig, SE cor., Sec. 2-32-3	Spudding.

DICKINSON COUNTY

Severs' No. 1 Livingood (O.W.D.D.), SE NW Sec. 13-13-21.	S.D. 4,900 ft.

EDWARDS COUNTY

Mid-Kansas O. & G. Co.'s No. 1 Converse, SW NE NE Sec. 30-24-18w	Drlg. 5,125 ft.

ELLIS COUNTY

Phillips Pet. Co.'s No. 1 Unknown, C SW Sec. 33-11-17w	Location.

ELLSWORTH COUNTY

Buckford's No. 1 Burke, C NE SW Sec. 14-14-9w	S.D. 50 ft.
Gurley Bros. and Barnsdall's No. 1 Union Pacific, NW SW Sec. 7-14-7w	S.D. 1,375 ft.
Phillips Pet. Co.'s No. 1 Hochman, NE NW SE Sec. 17-16-7w	Sil. 3,059-65 ft.; wtr., S.D.
Morgan's No. 1 Andrews, NE SW Sec. 3-17-8w	Sil. 3,398-3,400 ft.; wtr., abnd.
Walker et al's No. 1 Remley, SW SE NE Sec. 23-14-7w	S.D. 3,610 ft.
R. Gear et al's No. 1 Kroboth, SE NW Sec. 12-15-10w	Fishing 1,710 ft.

FINNEY COUNTY

L. F. Meyers' No. 1 Brown, S SW Sec. 16-25-34w	Rigging up.

FORD COUNTY

Swain et al's No. 1 Henthorn, C NW Sec. 21-25-24w	Drlg. 5,660 ft.

GRAHAM COUNTY

Schleimeyer et al's No. 1 Smith, SE Sec. 24-8-25w	R.U.S.T. 3,615 ft.

GREENWOOD COUNTY

York State Oil Co.'s No. 1 Joy, SE cor. Sec. 11-23-11	Machine.

HARVEY COUNTY

Liggett et al's No. 1 Davis, SW SE NE Sec. 7-24-1	S.D. 3,506 ft; wtr. at 3,490-95 ft.
Herndon, Blair, Deep Rock, No. 1 Santa Fe, C NW Sec. 19-23-1	Sil. 3,627-37; wtr., abnd.

HASKELL COUNTY

Victor Martin et al's No. 1 Weeks, C NW Sec. 8-28-31w	Rig.

KINGMAN COUNTY

Panhandle Drlg. Co.'s No. 1 Wetheral, C SE NW SW, Sec. 20-28-10w	Set 12-in. csg. 1,610 ft.; S.D.

LEAVENWORTH COUNTY

West et al's No. 1 Karb, C NW NE Sec. 32-10-21	T.D. 1,288 ft.; abnd.

MARION COUNTY

Farrell et al's No. 1 Williamson, C NW SE Sec. 21-19-4	Drlg. 490 ft.
Vernon et al's No. 1 Schmidt, C SW NW Sec. 35-19-1	Drlg. 880 ft.

McPHERSON COUNTY

Whan et al's No. 1 Nelson, NW SE Section 18-19-2w	Location.
Darby Pet. Co.'s No. 1 Pankratz, NW SE Sec. 5-20-1	Drlg. 3,100 ft.
Snyder et al's No. 1 Carlson, SE cor. Sec. 4-19-3w	Drlg. 2,783 ft.
Sidwell et al's No. 1 Nichols, NE NW NW Sec. 28-17-1w	S.D. 1,205 ft.

MORTON COUNTY

Hydraulic Oil Co.'s No. 1 State Land, NW SE Sec. 22, 34-43w	T.D. 3,640 ft.; temp. abd.

MORRIS COUNTY

Urschel et al's No. 1 Bersuch, NW SE NW Sec. 10-17-7	S.D. 1,385 ft.

NORTON COUNTY

Richards et al's No. 1 Colby, Sec. 17-4-21w	Rig.

OSAGE COUNTY

Briggs & Smith's No. 1 Wood, SE NW Sec. 21-14-15	S.O. 2,190-2,200 ft.; temp. abnd.

PRATT COUNTY

Ninnescah O. & G. Co.'s No. 1 Hardesty, SW SE SE Sec. 28-27-11w	U.R. 3,165 ft.

RENO COUNTY

T. L. Johnson's No. 1 Crotts, NE NW NE Sec. 27-26-10w	S.D. 50 ft.
Martin et al's No. 1 Yadu, C NW NW Sec. 15-24-5w	S.D. 318 ft.

NESS COUNTY

Sinclair Prairie Oil & Gas Co.'s No. 1, C SW SW Sec. 16-19-21w	Rig.

RICE COUNTY

R. Ramsey's No. 1 School Lot, NW SW NW Sec. 32-19-9w	Drlg. 2,190 ft.
Langston et al's No. 1 Wells, NE SE Sec. 4-20-9w	Rig.
J. Liggett et al's No. 1 Thodel, C NW NW Sec. 11-21-7w	S.D. 50 ft.

RUSH COUNTY

Barnsdall's No. 1 Schultz, SW cor. Sec. 3-19-16w	Dry and abnd. 3,880 ft.
Skelton et al's No. 1 Brock-Hartman, SW SE NE Sec. 4-18-16w	S.D. 50 ft.

SEDGWICK COUNTY

Scroggins et al's No. 1 Bartlett, NW SE NW Sec. 35-27-1	Abnd. 1,550 ft.

SHERIDAN COUNTY

Flo et al's No. 1 Shoemaker, SE SW Sec. 27-7-26w	Hole full water 4,535-45 ft.; S.D.

STEVENS COUNTY

Argus Prod.'s No. 2 Christopher, C NE Sec. 10-33-39w	S.D. 5,521 ft.

STAFFORD COUNTY

Stringer et al's No. 1 Swindle, SW NE Sec. 2-25-11w	Spudded; S.D.

SUMNER COUNTY

Austin et al's No. 1 Fog, SW SE SE Sec. 14-34-1w	Drlg. chat 3,909-70 ft.; show oil.
Trees Oil Co.'s No. 1 Tompkins, SW Sec. 26-33-1	Location.
Trees Oil Co. and Shell's No. 1 Springate, NE SE SW Sec. 6-34-2	S.D. 3,639 ft.

Unusually Good Well South of St. Louis Pool; Caddo County to Get Another Deep Test

By W. A. SPINNEY
Staff Correspondent, Oklahoma Fields

The Cement Field in Caddo County is to have the deep formations tested again by the drilling of an old well deeper. J. B. Nichols and others' No. 1 Rigney, NE cor. NW SE, Section 12-5-9w, which has been shut down since December, 1930, after being drilled to a total depth of 3,342 feet, is to be drilled to the Wilcox sand if possible. The owners of the test have had this area worked by geologists since the deep test, No. 6 Culp, in Section 6-5-9w, was drilled by the Mid-Kansas Oil & Gas Co. to a total depth of 10,079 feet, which made it the deepest hole in the State, and they believe the Wilcox sand may be found at 7,000 to 7,500 feet deep. If No. 1 Rigney is a producer the owners expect to drill at least five other deep wells.

One of the interesting wells completed in Oklahoma during the week was Hilton Phillips and others' No. 1 Cook, SW cor. SE, Section 21-7-4, in the extreme southwest edge of the St. Louis Pool, in Pottawatomie County. The well first found a showing of oil in the Cromwell sand and was then drilled deeper to the Simpson sand at 4,155 feet where it gauged 1,940 bbls. the first 19¾ hours. It was shut in and later opened for a potential gauge and flowed 175 bbls. the first hour and 150 bbls. the second hour. The gauge on November 4, was 986 bbls. in 10 hours.

The English Drilling Co.'s No. 1 Heenan-Coe, NE cor. SE NE, Section 32-3-7w, a wildcat in Grady County, which found a showing of oil at 3,266-87 feet where it made around 20 bbls. of oil and 100 bbls. of water a day, is being drilled deeper. The contract depth is 3,500 feet.

The wildcat test of Stanolind Oil & Gas Co. and others' No. 1 Starr, SE cor. NW, Section 18-15-8, Creek County, is to be given a 10-day potential test. It made, on October 31, 240 bbls. of oil; on November 1, 294 bbls., and on November 2, 309 bbls., after a 10-quart shot in the Wilcox sand at 3,852-62 feet. It is believed to have opened a new Wilcox sand pool in Creek County.

The daily average production of Oklahoma for the week ending November 5, was estimated at 394,200 bbls. which is a decline of approximately 1,200 bbls. a day from the previous week.

Southwestern Leasing

Leasing is showing a slight upturn in Grady, Kiowa and Comanche Counties. Near the Stephens County line in Comanche County, some new leases are being taken due to the finding of production in the Hanbury area. In Grady County, Ship & Nash's No. 1 Wade, in Section 35-3-7w, is rigging up. It is an old hole where drilling was halted at 2,498 feet several years ago. Since the English Drilling Co.'s No. 1 Heenan-Coe found production at 3,255-87 feet in Section 32-3-7w, this old well will be drilled to the same formation.

The County Line Pool, along the boundary lines of Lincoln and Creek Counties, now has a potential of 4,154 bbls. a day from nine producing wells, with two others drilling. The production of this pool is restricted to 50 bbls. per well per day.

Recent wells completed in the County Line Pool include the Pure Oil Co.'s No. 1 Chapman, SW cor. NW SW, Section 6-15-7, with a potential production of 710 bbls. a day. Sinclair Prairie Oil Co.'s No. 1 in the SE cor. NW, Section 6-15-7, with a potential of 105 bbls. daily.

Another Community Test

The second test on the community block in southwestern Noble County was announced during the week. The well is in the C SW SW, Section 8-20-2w. It is owned by the following companies which unitized 2,160 acres of leases: Shell Petroleum Corp., Sinclair Prairie Oil Co., Gypsy Oil Co., L. H. Wentz, Carter Oil Co., Twin State Oil Co., Phillips Petroleum Co. and Empire Oil & Refining Co.

The discovery well, drilled by the same companies, was No. 1 Wolff, C SE NW, Section 17-20-2w, flowed 1,815 bbls. the first 24 hours and made a total of approximately 20,000 bbls. of oil on a 10-day potential gauge. It has been shut in. Under the present state proration law this well is only allowed to produce 50 bbls. of oil daily and in order to make up the overage it may be shut in for the next 14 months.

Southern Fields Are Active

Operations in southern Oklahoma continue active, and a pair of new tests are being considered. J. Travis and others are planning a test in Section 29-2-7w, in northern Stephens County, in wildcat territory. G. Pace and others have taken over a block of acreage in and around Section 32-2s-6w, on which a test may be started in the near future. J. C. Chambers and others' No. 1 Dolen, SW cor. NW NW Section 15-1s-8w, found sand at 2,106-11 feet, where a showing of oil was reported. Casing was being landed prior to testing. The test is located south and west of Duncan.

H. J. Brown's No. 1 Denham, NW cor. SE NE Section 11-2s-8w, Stephens County, found a showing of gas at 1,500-05 feet. It may be drilled deeper.

Linson and others' No. 1 Dose, NW cor. SW NW Section 4-2s-8w, Stephens County, has completed a fishing job and was landing a liner to test a showing found in sand at 2,216-29 feet.

Ed Chamberlain and others' No. 1 Parker, NE cor. SE SE Section 11-2s-8w, found a showing of oil in sand at 1,467-91 feet and was moving back the boiler prior to testing.

The development of the Tatums Pool in Carter County was spreading. The Carter Oil Co.'s No. 2 Lynn, SW cor. NW NE Section 31-1s-2w, may extend production in the Tatums area. It was coring deeper from 2,201 feet and it was expected to land the last string of casing this week. The test found broken sand from 2,102 feet which was showing oil to its present total depth.

B. F. Lundy and others' No. 1 Majors, NE cor. SE NE Section 25-1s-3w, which is located between the old production and the extension area, was still drilling around 2,050 feet.

P. Turner and others' No. 1 Sparks-Turner, SW cor. NW Section 13-1s-3w, which has been shut down on account of a water shortage, has resumed operations after a new line had been laid to the test. It was drilling at 1,500 feet. It is three locations north of production.

Page & McFarland's No. 1 Brooks, NE cor. SW SW Section 13-1s-3w, on the north edge of the field, was completed for 420 bbls. of oil a day from a series of sands at 2,303-85 feet.

Under a recent order issued by the Oklahoma Corporation Commission the daily allowable production in the Oklahoma City Field was fixed at 73,510 bbls. for November, as this was the amount nominated by the purchasing companies at the last hearing.

Of this production the lime zone is allowed 875 bbls. a day, new wells were given 1,243 bbls. daily. The 123 wells making water in the field will be allowed 100 bbls. per day each, and the 792 wells with potentials will be allowed 25 bbls. per day each. The remainder of allowable production will be prorated on the basis of 1 per cent of the potential production of the wells.

Seven wells in the Oklahoma City Field were given until November 28 to make up underproduction or be canceled, and underproduction was canceled on six wells in the field that are believed to be unable to make up their underage. The amount of underage canceled was estimated at 150,000 bbls.

Champlin's New Petition

The Champlin Refining Co. filed a petition with the Corporation Commission attacking existing proration rules in Oklahoma and criticising the proposed amended rules recently filed by the Anderson-Prichard Oil Corp., which will be considered at a hearing on November 28. The Champlin Refining Co. asks that its petition be considerel at the same time.

The Champlin Refining Co. has long been an opponent of proration in the Oklahoma City Field, where it has 12 producing wells from which, in September, it ran an average of about 600 bbls. per day or 50 bbls. per well. The company fought the Corporation Commission through the courts all the way up to the Supreme Court of the United States only to find that the conservation law under which the Corporation Commission is carrying on proration is constitutional.

Its latest petition, filed on Friday, November 4, claims the Anderson-Prichard petition does not fully cover the ratable taking of oil in Oklahoma and that the proposed regulations are so complicated as to be "practically worthless." The petition alleges "abuses, misunderstanding, discrimination, oppression and unfair takings" of oil.

The Champlin company declares itself favorable to the taking of new potentials in all pools, the same to be taken as early after January 1, 1933, as possible and that on the basis of these potentials "new allowables for all fields be fixed and the market demand for the State be allocated on a prorated or equal basis to these pools."

The most active part of the Greater Seminole group recently has been the Holdenville area of Hughes County. Production has been found in several different horizons in the field and it has been yielding such large production that further development may be delayed on account of the lack of pipe line facilities. Some of the oil produced in that area is low gravity, testing around 26 degrees, corrected. This low gravity oil is found in the shallow sand at approximately 1,200 feet. The high gravity oil is found in the Booch sand around 2,900 feet. There are about 30 operations under way, and the completions have been averaging around three or four a week.

Producers in the Holdenville area have been endeavoring to secure pipe line connections, but new connections are not wanted by the purchasers at this time, and as the result several wells are shut in.

Sovereign Oil Co.'s No. 1 Scott, NW cor. SW SW, Section 10-7-8, was estimated at 50 bbls. an hour from the Booch sand at 2,900-16 feet. It flowed into the slush pits and no gauge was made.

Burke-Greis Oil Co.'s No. 1 Chapman, SW cor. NW, Section 10-7-8, was drilled to a total depth of 2,926 feet and plugged back to 2,923 feet, and is now ready to make a production test.

In the southeastern part of the area Milam & Capshaw's No. 1 Holmes, in Section 11-7-8, found a showing of oil in the shallow horizon, but drilled to 1,600 feet where it found 3,000,000 feet of gas a day. It was drilling deeper at 1,750 feet.

Radial Oil Co.'s No. 1 Foster, NW cor. SW SW, Section 14-7-8, was drilled to 1,180 feet and was making 7,500,000 feet of gas a day and may be drilled deeper.

Fleetborn Oil Co.'s No. 1 Foster, NW cor. SW, Section 14-7-8, Holdenville district, found water in the shallow sand at 1,236 feet and was plugging back to test a showing of sand at 1,178 feet.

Boettcher Oil Co. and others' No. 1 Jacobs, NE cor. SE SE, Section 9-7-8, is a locatioin. Mid-Continent Petroleum Corp.'s No. 2 Harjo, SE cor. NE SE, Section 9-7-8, is also a new location.

Indian Land Sale

Twenty-seven tracts were leased to oil companies by the Anadarko Indian Agency last week. The acreage is located in the north central part of Caddo County. The Mid-Kansas Oil & Gas Co. took two of the tracts and the Denver Producing & Refining Co. the remainder.

Mid-Kansas Oil & Gas Co. purchased the SW Section 16-9-10w, and the NE Section 22-9-10w. The Denver Producing & Refining Co. purchased the NW Section 2-9-10w, W half NE and E half NW Section 20-9-10w, NW and SE Section 21-9-10w, SE Section 22-9-10w, SW Section 13-9-11w, SW SE and the N half SE and SE SE and the SW Section 10-10-11w, N half NW and SE NW and SW NW and NE Section 14-10-11w, all of Section 15-10-11w, the SW and SE and NE Section 22-10-11w.

Lincoln County Attractive

Leasing in Lincoln County continues active, transactions recently made include the following purchases: Phillips Petroleum Co. N half NW Section 34-12-4, and the SW Section 33-12-4; Gypsy Oil Co. the W half SW Section 31-12-4; Twin State Oil Co. the N half SW Section 10-15-2, N half NW Section 18-15-2, SE Section 30-15-4, SW NW Section 6-13-3; Mid-Continent Petroleum Corp. E half NE Section 3-16-3, W half NW Section 35-13-3 and SE Section 5-15-2; The Texas Company the SE SW Section 21-12-2.

In Noble County, the Sinclair Prairie Oil Co. purchased the N half SW, Section 19-20-1w, the Empire Oil & Refining Co. the S half SW, Section 5-23-1.

In Kingfisher County, the Sinclair Prairie Oil Co. purchased the NW Section 17, the SE Section 27 and the SW Section 33-15-7w; the Magnolia Petroleum Co. the SE Section 32-17-8w.

In Logan County a leasing campaign has developed in the city of Guthrie with W. G. Phillips taking a 10-year lease on several blocks, covering all or part of Blocks 3, 15, 18, 26, 30, 32, 39, 46, 48, 49 and 53, in Belyea second addition, and Blocks 3 and 11, Belyea first addition, and Blocks 13, 15 and 16, Hainer addition.

According to Umpire R. M. Collins,

the potential production of the Greater Seminole area totals 316,753 bbls. per day. The pools included in Class B have a potential of 277,744 bbls. daily, as of November 1. The Class B pools have been given an allowable of 41 per cent of their potential production.

The Little River Pool shows the largest potential of any of the Greater Seminole pools, 39,139 bbls. daily, with the St. Louis Pool next with a potential of 34,626 bbls. The Fish Pool, in Class C, has a potential of 34,778 bbls. daily.

All the Earlsboro pools combined have a potential of 50,310 bbls. daily. Separately, they are rated as follows: Earlsboro (proper), 23,967 bbls.; East Earlsboro, 17,918 bbls.; South Earlsboro, 4,562 bbls.; Earlsboro extension, 531 bbls.; Earlsboro Townsite, 3,332 bbls.

Potential production of all the Greater Seminole pools, as of November 1, was as follows, the figures representing barrels per day:

Pool—	Class A wells	Class B wells	Stripper wells
Allen	70	17,904	290
Asher-Wanette	...	8,736	157
Bowlegs	112	25,065	96
Carr City	47	19,781	24
Earlsboro	323	23,175	469
East Earlsboro	95	17,696	127
Earlsboro (south)	...	4,552	10
Earl'boro (E. ext.)	...	531	...
Earlsboro T'w'site	129	3,177	26
Konawa	82	9,371	164
Little River	174	38,576	389
East Little River	33	3,263	41
Maud	1,617	.....	836
Mission	77	14,414	80
Sasakwa	96	2,178	198
Searight	89	5,736	145
Seminole	134	23,122	208
East Seminole	35	2,335	35
West Seminole	...	17,098	...
St. Louis	576	32,994	1,056
Total	3,689	269,704	4,351

In addition to the above figures, the Wewoka Townsite Pool is credited with a potential of 4,231 bbls. per day and the Fish Pool with 34,778 bbls., which, with the 277,744 bbls. credited as the potential of the pools in the above table, gives the Greater Seminole area a total potential of 316,753 bbls. per day.

Atoka County

George and others' No. 1 Lowman, NW cor. SW Section 9-1-15, is a machine. Croxton Oil & Gas Co.'s No. 1 Downing, C SE NE Section 17-1s-14, was drilling at 200 feet.

Cherokee County

La Piere and others' No. 1 Woods, C SE SE Section 27-17-21, was abandoned at 1,504 feet.

Creek County

Porter and others' No. 1 Morris, SW cor. SE NE Section 7-19-9, is a rig. Merritt and others' No. 4 Richards, SE cor. NE NE Section 27-18-8, is a machine. Roach & McMurty's No. 1 Luckey, NE cor. SE SW NE Section 28-16-9, is a machine. C. H. Mechling's No. 6 Nave, NW cor. NE SE, Section 25-18-11, was spudding. A. Pepis and others' No. 1 Lee, C NE NE Section 12-18-11, was drilling at 200 feet. Johnson Oil & Refining Co.'s No. 1 Prince, SW cor. NW NE, Section 3-18-8, is a rig. Same company's No. 5 Evans, SE cor. NW NW Section 29-19-9, made 30 bbls. from 2,330-60 feet. L. C. Dean and others' No. 1 Ard, SE cor. NW Section 16-19-9, was completed as a dry hole at 2,428-2,501 feet. Westfall Drilling Co.'s No. 1 Jackson, SE cor. NE NW, Section 3-18-8, was completed for 200 bbls. from 2,620-50 feet. L. B. Jackson's No. 1 Hall, SE cor. NE NE Section 28-18-8, was completed for 97 bbls. from 1,339-69 feet. S. W. Anthony's No. 5 Muskogee, NE cor. NW NE Section 9-16-12, was completed for 1,500,000 feet of gas at 1,725-45 feet.

Kay County

Crawford and Long's No. 1 Richards, SW cor. NW Section 9-25-1w, was drilling at 200 feet.

Carter County

Noble's No. 3 Trahern, SE cor. NE NW, Section 31-1s-2w, was spudding. Gouin and others' No. 2 Burton, C NW NW SE Section 31-1s-2w, is a rig. Same operators' No. 1 Burton, SE cor. SW NE Section 31-1s-2w, was completed for 58 bbls. at 2,134-48 feet. Page & McFarland's No. 2 Brooks, NE cor. SW SW Section 13-1s-3w, was completed for 98 bbls. from 2,307-97 feet. Schermerhorn and Ardmore Oil Co.'s No. 14 Watkins, SE cor. NW SE Section 24-4s-3w, was completed for 87 bbls. from 1,729-65 feet.

Hughes County

Boetcher Oil & Gas Co. and others' No. 1 Jacobs, NE cor. SE SE Section 9-7-8, is a location. Mid-Continent Petroleum Corp.'s No. 2 Hays, SE cor. NE SE, Section 9-7-8, is a location. Pringle & Marshall's No. 1, SE cor. SW SW SW, Section 10-7-8, is a location. Mid-Continent Petroleum Corp.'s No. 1 Factor, NE cor. SE Section 15-7-8, is a location. Radial Oil Co. and others' No. 2 Diamond, NW cor. Section 23-7-8, is a location. Nash & Redwine's No. 2 Carter, SW cor. NE SW, Section 15-5-11, is a machine. Same operators' No. 3 Robertson, SE cor. SW Section 15-5-11, made 1,500,000 feet of gas from 1,208-40 feet. Fremire Oil & Gas Co.'s No. 1 Hampton, NE cor. NW NE Section 20-8-10, was abandoned at 3,189 feet.

Marshall County

Centrop Corp.'s No. 1 Binge, CEL NE SE Section 25-7s-5, made 15 bbls. from 504-09 feet.

Muskogee County

P. Boyle and others' No. 5 Russell, NW cor. SE SE Section 19-15-16, was spudding. Jolly and others' No. 5 Spaulding, SE cor. SW SW NE Section 8-15-18, was completed for 50 bbls. a day from 1,604-14 feet. J. P. Flannigan's No. 1 Harjo, SE cor. NE SW NW Section 9-15-18, made 5,000,000 feet of gas a day from 1,623-85 feet. Neumeyer and Wallace's No. 1 Dan (twin), SW cor. NW NW Section 14-13-15, made 18 bbls. from 1,960-68 feet.

Noble County

Shell Petroleum Corp. and others' No. 1 Jerome, C SW SW Section 8-20-2w, is a rig. Same operators' No. 1 Wolff, C SE NW Section 17-20-2w, was completed for 1,817 bbls. from 5,195-5,210 feet; total depth was 5,262 feet.

Oklahoma County

Wirt Franklin's No. 1 Miller, C NW SW Section 35-12-3w, is a rig. Helmerich & Payne's No. 1 Ownby, C NW SE Section 22-11-3w, is a rig. Marion Oil Co.'s No. 1 Maxey, SE cor. SW SE Section 3-11-3w, was completed for 3,227 bbls. in four hours from Wilcox sand at 6,278-6,383 feet. Phillips Petroleum Co.'s No. 1 Fish, C NE SW Section 15-11-3w, was completed for 1,519 bbls. of oil in four hours from 6,402-6,526 feet. Anderson & Kerr's No. 1 Lippert, SW cor. NW SE Section 22-11-3w, made 3,594 bbls. in four hours from 6,470-6,581 feet. Indian Territory Illuminating Oil Co.'s No. 1 Miller, NE cor. NW Section 35-11-3w, made 105 bbls. in 30 minutes from 6,675-85 feet.

Osage County

Ohio Osage Oil Co.'s No. 3 well, SW cor. SE Section 27-21-9 (twin), is a rig. Geraldine Oil Co.'s No. 9 well, C NW SW Section 30-21-9, was drilling at 100 feet. Lewis Production Co.'s No. 1, NE cor. SE Section 20-24-7, made 80 bbls. from 2,639-62 feet. Galt Brown's No. 6, CSL SW NE Section 15-24-8, was completed for 40 bbls. from 2,606-39 feet.

Okmulgee County

Norfolk Oil Co.'s No. 1 Good, NW cor. NE NE Section 19-16-14, was spudding. C. Smith's No. 3 Rentie, NE cor. SW SW Section 18-14-15, was spudding. W. B. Pine's No. 1 Jackson, SE cor. NW NW Section 17-13-16, was completed for 2,000,000 feet of gas at 1,974-2,054 feet. J. L. Selby's No. 1 McKinney was abandoned at 773 feet. Thompson & Jordan's No. 1 Lowe, CWL NW NW Section 12-14-12, made 10 bbls. from 2,709-19 feet. J. Dulaney's No. 1 Larney, SE cor. NW NW Section 28-15-14, was completed for 10 bbls. from 1,656-68 feet. C. D. Klingsmith's No. 5 Grayson, NE cor. SE NW Section 35-16-11, was spudding.

Okfuskee County

J. L. Selby's No. 1 Riter, NE cor. NW Section 9-12-11, was completed for 250,000 feet of gas from 2,350-65 feet. The Texas Company's No. 1 Gregory, NW cor. NE Section 36-10-11, an old well drilling deeper, was rigging up; total depth 3,094 feet.

Pawnee County

Deep Rock Oil Corp.'s No. 1 Crow, NE cor. SE, Section 26-23-5, was digging cellar. Geraldine Oil Co.'s No. 1 Bettis, SW cor. SE Section 6-20-9, was abandoned at 2,400 feet. Pueblo Oil Co.'s No. 4, SW cor. NE NW Section 14-21-8, made 90 bbls. from 2,230-51 feet.

Pottawatomie County

Mid-Continent Petroleum Co.'s No. 5 Archer, NE cor. SW SE Section 14-6-3, was abandoned at 3,594 feet.

Pontotoc County

Anderson & Kerr's No. 1 Zoller, NW cor. SW Section 5-6-5, is a location. Benedum & Trees' No. 1 Starrett, SW cor. NE SE Section 28-5-5, is a location. Ligon & Todd's No. 2 Starrett, NE cor. SE SE Section 29-5-5, is a location. Delaney & King's No. 4 Smith, C N half SE NE Section 29-5-8, was abandoned at 897 feet. Boetcher Oil & Gas Co.'s No. 2 Toby, C NW SW Section 24-4-7, an old well drilling deeper, made 35 bbls. from 1,730-38 feet.

Pittsburg County

Midwestern Oil & Gas Co.'s No. 1 Odgen, C SE SE Section 5-7-18, was completed for 8,000,000 feet of gas a day from 1,820-2,060 feet.

Seminole County

Gypsy Oil Co.'s No. 1 Rentie, NE cor. Section 17-9-6, was completed for 419 bbls. from 4,221-36 feet. Tidal Oil Co.'s No. 6 Laskey, NW cor. SE SE Section 19-9-6, an old well drilling deeper, was abandoned after plugging back to 2,680-85 feet; total depth 4,187 feet. Bee Oil & Gas Co.'s No. 1 Harbor, SW cor. NE Section 20-9-6, was completed for 575 bbls. from 2,741-88 feet. Gypsy Oil Co.'s No. 4 Moly, SE cor. NW NW Section 20-9-6, an old well plugging back, total depth 4,264 feet; plugged back to 2,702-67 feet, and abandoned. Sunbeam Oil Co.'s No. 1 Campbell, NW cor. SE Section 20-9-6, made 60 bbls. from 2,755-98 feet. The Texas Company's No. 3 Sandlin, SE cor. NW SW Section 29-9-6, was completed for 1,045 bbls. from 4,129-49 feet.

Stephens County

Mudge Oil Co.'s No. 25 Ward, NE cor. SE NW Section 26-1s-5w, was drilling at 50 feet. California Production Co.'s No. 1 Florence, NE cor. NW SE Section 11-3s-6w, was completed for 2,000,000 feet of gas from 231-33 feet.

Tulsa County

Rader and others' No. 1 Bittles, SW cor. SE NE Section 13-16-12, was spudding.

Wagoner County

La Piere and others' No. 1 McIntosh, CWL SW SW Section 13-18-15, was abandoned at 1,017 feet. Kaufman and others' No. 1 Johnson, SW cor. SE NE Section 22-18-15, was drilling at 500 feet. J. K. Oil Co.'s No. 1 Anderson, NE cor. SW Section 19-17-17, was abandoned at 1,260 feet. C. D. Bradley's No. 2 Kermal, SW cor. NW NE Section 7-15-17, was abandoned at 2,065 feet.

Wildcat Operations in Oklahoma

Northern Oklahoma

ALFALFA COUNTY

Company, farm and location—	Remarks:
Smith Brothers' No. 1 Forbes, SE cor. NW NW Sec. 12-27-11w	S.D. 1,232 ft.
J. W. Bailey's No. 1 Acre, SW cor. NE Sec. 14-24-11w	S.D. 5,502 ft.

ATOKA COUNTY

Barton's No. 4 Miller, SE NW SE SW Sec. 26-1-14	Drlg. 35 ft.
Hicks' No. 2 Morris, SE NE NW SE Sec. 5-1-15	Drlg. 80 ft.
Barton's No. 1 Miller, NW SW SE SW Section 26-1-14	Drlg. 119-222 ft., est. 20 bbls.
Hick's No. 2 Morris, SE NE NW SE Sec. 5-1-15	Drlg. 165-85 ft.; shot 80 qts.; T.D. 215 ft.
George's No. 1 Reddin, SW NE SW Sec. 19-1-15	Drlg. 635 ft.

BECKHAM COUNTY

Pattel Royalty's No. 1 Goose Tree, SW SE SW SE Sec. 32-10-23w	S.D. 924 ft.
Mid-Texas Co.'s No. 1 Sidell, NE cor. SW SW Sec. 17-22-22w	S.D. 2,550 ft.
White et al's No. 1 Green, SW cor. Sec. 34-10-24w	S.D. 3,575 ft.

BLAINE COUNTY

Watonga Petroleum Co.'s No. 1 Masters, SW NW NW, Sec. 27-16-11w	S.D. 1,175 ft.

CADDO COUNTY

Abernathy & Brown's No. 2 Houston, Sec. 24-6-13w	S.D. 1,115 ft.

CHEROKEE COUNTY

La Piere et al's No. 1 Woods, C SE SE Sec. 27-17-21	S.D. 1,504 ft.

COAL COUNTY

Dodd & Burton's No. 1 Grigsby, NW SE NE Sec. 35-1-8	Rig.
Funk & Russell's No. 1 Miller, SE NE Sec. 10-2-8	Drlg. 2,705 ft.

COMANCHE COUNTY

G. W. Stogner's No. 1 Doebel, C SW SW Sec. 3-3-9w	S.D. 1,450 ft.

CREEK COUNTY

O. O. Owen's No. 1 fee, NW cor. Sec. 23-15-7	Drlg. 1,206 ft.
E. L. Jillson et al's No. 1 Starr, SE NW Sec. 18-15-8	Drlg. Wilcox 3,852-55 ft.; est. 200 bbls.

CUSTER COUNTY

Miley Pet. Co.'s No. 1 Caldwell, NE Sec. 12-14-14w	Location.

ELLIS COUNTY

Algers Pet. Co.'s No. 1 Roper, C SE NW Sec. 21-20-24w	S.D. 50 ft.

GRADY COUNTY

English Drlg. Co.'s No. 1 Heenan-Coe, NE SE NE Sec. 32-3-7w	Show oil 3,255-87 ft.; to test; drlg. out cmt.; swbd. 3 bbls. per hr., est. at 50 bbls. daily; running tubing to pump 20 bbls. and S.D.

GARFIELD COUNTY

E. L. Love et al's No. 1 White, SE cor. NW Sec. 9-24-6w	S.D. 5,850 ft.

GREER COUNTY

French's No. 1 Murphy, SW NW Sec. 23-7-21w	S.D. 1,645 ft.

HASKELL COUNTY

Ault et al's No. 1 Hall, NW SW SW Sec. 14-9-19	S.D. 2,000 ft.
Ault et al's No. 1 Hall, SE NW Sec. 25-19-9	S.D. 200 ft.

KAY COUNTY

Lewis et al's No. 1 Harris, SE NW Sec. 14-25-1	Location.
Mummert Drlg. Co. et al's No. 1 Cormick, C NW SE Sec. 9-27-2	S.D. 3,693 ft.
Blackwell Oil Co.'s No. 1 Harshman, Sec. 2-26-1w	Rig on ground.

KIOWA COUNTY

McWhirter Bros.' No. 1 Kline, SE NW Sec. 5-6-16w	S.D. 830 ft.
Christian's No. 1 Jones, NE SE Sec. 8-7-18w	S.D. 1,610 ft.

LINCOLN COUNTY

Sovereign Oil Co.'s No. 1 Flowers, SW SE SE Sec. 14-12-3	Drlg. 5,092 ft.

LOGAN COUNTY

Eason Oil et al's No. 1 Gun Club, NW NE Sec. 10-16-4w	Drlg. 4,925 ft.

NOBLE COUNTY

Stanolind O. & G. Co. et al's No. 1 Kalb, C NE NW, Sec. 33-20-2w	Spudding.
Rollins et al's No. 1 Frank, SE SW Sec. 6-20-2w	Rig.
Wentz Oil Co.'s No. 1 Wolff, C SE NW Sec. 17-20-2w	Wilcox 5,193-96 ft.; flowed 1,817 bbls. 24 hrs.; drlg. to 5,262 ft.; show wtr.; P.B. to 5,225 ft., now shut in.

(Continued on Page 54)

Two Promising Tests in Southwest Texas Are Dry But Several Wildcats Have Oil Showings

By B. D. STEVENSON
Staff Correspondent, Southwest Texas Fields

SAN ANTONIO, Tex., Nov. 7.—Two tests which last week looked as if they might mean the opening of new pools in the Government Wells chain in north Duval County proved failures. Buchanan & Tyrrell's No. 1 Duval County Ranch Co. in Survey 96, 3 miles north of the North Government Wells Pool, tested gas spraying a little oil in the Cole sand at 1,640 feet and drilled to 2,489 feet, but it failed to get any thing in the sands producing in the Government Wells Field and was abandoned and the drilling outfit was being moved to No. 1 Foster in Survey No. 268, 5 miles farther north and 1 mile east.

Sun Oil Co.'s No. 1 Duval County Ranch Co., in Suryev 78, 2 miles east of the Buchanan & Tyrrell test in Survey No. 96, bailed dry in sand at 2,137-54 feet, though the core had looked good for an oil well. It cored a little deeper and at last accounts was bailing again. The Sun test, 1 mile east and 3 miles north of the North Government Wells Pool, is located with reference to the Escarpment about as other pools and much was expected of it. It follows the slightly east of north trend of the other pools in the area and with the showing of oil that it had it at once created interest. It has possibilities yet, however, of making a well in the next couple of hundred feet.

Two new tests are starting in the southeastern part of the North Government Wells Pool with the idea of developing the upper sand of the field. C. G. Porter is starting No. 1 J. T. Smith in Survey 46, the location being 200 feet from the north and west lines of the northwest quarter of the northeast quarter of the survey. Buchanan & Tyrrell's No. 1 Smith was 330 feet from the north and west lines of the same tract, and it had some oil, but was too much of an east edge location. The new operators are moving a little to the northwest. W. T. Daniels' No. 1 F. J. Smith is located 200 feet from the north and west lines of the southwest quarter of the northeast quarter of No. 46, being the 40 acres next south of that on which Porter is drilling. They figure they are far enough northwest to get inside the water line of the upper sand. Both tests are on leases held by the Sun Oil Co.

Wildcats Showing Oil

Several wildcats in Southwest Texas were showing a little oil or gas the past week. P. Rosenberg, Inc.'s No. 1 Vela, in Webb County, on the west side of the Carolina-Texas Field and west of the fault line as placed by many geologists, showed up for a good gas well at between 1,700 and 1,800 feet. Information from this test was not complete late in the week but the showing was considered important. It is in Survey 267, and considerably north of the Laurel Field discovered by Rosenberg a few months ago in Survey 270.

It would seem that if it makes a worthwhile producer it will tend to confirm the work of geologists lately done in the field and may have an important relationship to the Laurel Pool 4 miles almost due southwest of it.

Greenlee's No. 1 Faesler in Medina County had a sand at 1,215-30 feet that showed some oil and has set casing.

B. & B. Oil Co.'s No. 1 Crown Brick & Tile Co., in Starr County, 3 miles southeast of the Rio Grande City Pool, had a showing of oil at 2,005 feet.

Two wildcats in Guadalupe developed an interesting situation. H. A. Suttle's No. 1 Halm, in the Joseph Kent Survey about 2½ miles northwest of the Sal-Mar Pool, which as yet consists of only the discovery well, was abandoned below 2,100 feet. It got the chalk around 1,848 feet. The test is 500 feet west of the Pagenkopf No. 1 Halm, drilled three years ago, which topped the chalk at 1,622 feet. Suttle is a little too far west, and is moving 525 feet due south in the hope of cutting the fault plane and getting the Edwards limestone.

Three miles south, J. T. Stover's No. 1 Hoffman, at 2,087 feet, topped the Eagleford and found no chalk. Stover is now drilling below 2,100 feet and headed for the Edwards in expectation of getting it high and finding production. The test is 2 miles southwest of the Sal-Mar producer.

Robert C. Hill's No. 1 Schell, in northern Bexar County, another wildcat, is reported with a showing of oil at around 900 feet.

Bee County

Several new locations have been made in the Tuleta Field in Bee County and all of them west or southwest of the discovery well, since the bringing in of Nichols' No. 2 Harris, on the southwest side, for a good well. Nichols is moving his rig 660 feet due west to the center of Lot 12 of Section 13 of the Ragsley subdivision of the Uranga grant and will drill H. H. Weinert's No. 1 Harris.

Taber & O'Neill made a location on Lot 13 on the 10-acre tract next south of that on which Nichols' No. 2 Harris is located and Wallace & Bowles made a location 1 acre next south of Weinert but did not follow the orders of the railroad commission to locate them in the center of the tracts. They erected derricks but it is understood have been stopped by the commission and may have to change the locations. They were trying to get farther to the northwest to get in line with the producers of the field.

Hurlburt, who drilled No. 1 Woods several miles southeast of the town of Beeville, a few years ago, has gone back to work on the well. Some weeks ago the well was uncapped and made a head of oil. It had been abandoned around 5,000 feet as a failure. Hurlburt has rigged up a tractor and is cleaning the hole out. Also Poole and others are arranging to drill a test about 900 feet south of it. The Hurlburt showing and some wildcats drilled since and before seem to indicate a structural condition favorable for oil accumulation.

Saxet Field

A total of 13 new operations are under way in the Saxet Field in Nueces County which at this time has an output of around 2,000 bbls. daily. With the completion of the new tests even under restricted flow the output of the field can reasonably be expected to increase around 50 per cent. All of the new operations are in proven territory and may reasonably be expected to be producers in some one of the many sands of the field. With the exception of a few tests the field until recently saw only a litle continuous activity.

Surface casing was set the past week on five of the new operations, Gibson Oil Co.'s No. 1 Morgan, Saxet Oil Co.'s No. 1 Dunn, Titus & Calloway's Nos. 1 and 2 Lagasse and No. 1 Hutchins. Derricks are up for the Titus & Calloway No. 3 Lagasse and No. 1 Morgan, and O. R. Seagraves' No. 1 Lagasse and locations have been made to be drilled immediately for the George Noble's No. 1 Homeland Syndicate, Gulf Port Oil Co.'s Nos. 1 and 2 Isencee and No. 3 Bliss, and Smith & Capps' No. 1 Hutchins.

With the exception of the oil produced by the Houston Oil Co. it is understood all of the production from the field is going to the Gulf Pipe Line and that from the new wells will go to the same concern which has a pipe line to the Corpus Christi dock, 8 miles away.

Jim Wells Wildcat

F. A. Lain's No. 1 Vernon Porter, in the northeast corner of Jim Wells County in the bend of the Nueces River, topped the Marine Oligocene at 2,759 feet almost to the foot as estimated by the geologist. The sands that are expected in the next 500 feet or more are the aim of this test. There are about six sands normally and they are producing in other areas. The hole that is made by this test this week, therefore, will largely tell the tale as to whether it will produce or not.

Jim Hogg County

Clark & Cowden, who drilled the No. 1 E. Vela in Jim Hogg County, a few miles northeast of the Randado Pool, are starting another test nearby. The No. 1 Vela was reported last week as having a lot of gas though not properly completed. While setting casing it got away and dropped shutting off most of the sand at 2,246-70 feet, but in spite of that made about 6,000,000 feet of gas.

Above the Balcones

Activity above the Balcones fault is again reviving. Blanco and Kendall Counties are each seeing some of it.

H. T. McGee of Amarillo has contracted to take over the Forbes and Winans test in Survey 167 in Blanco County and drill it to 2,250 feet, starting within 90 days.

The death of P. B. Sterling cut short the plan to develop the acreage around the Willie Werner in Kendall County which came in a small producer about two years ago. However, those associated with Mr. Sterling are getting together and expect to go on and develop what they found in the No. 1 Werner and develop a pool.

Hardy Sitton is working in both Kendall and Blanco Counties. Tests in both counties have been shut down for the most part for many months but the present activity seems to promise that these counties will again see some real activity.

In Kerr County, Vanmore Oil Co. has started a test near Center Point and J. E. Anderson of San Antonio is preparing to take over the Verde Oil Co. No. 1 J. D. Witt, 4 miles south of Center Point which has been standing at 118 feet for several months and will drill it to contract depth.

General Activity

Activity in Southwest Texas, the territory generally described as west of the Brazos and south of the Llano uplift has been steadily increasing during 1932. At the close of the week ending January 13 there were 154 tests listed in this area. At the close of the week ending June 3, 206 tests, August 5, 226 tests, and at the close of the past week, 251 tests.

With the exception of some concentration of activity in Starr County, and northern Duval County, the activity is quite generally scattered over the entire district.

Failures in Goliad County

Two failures were charged up to profit and loss in Goliad County last week, one at Hord's Creek and one at Slick Pool. Slick-Seeligson's No. 1 Kaufman, a little southeast of Zoch's No. 1 Kaufman, was drilled to 4,490 feet and abandoned. Zoch got production at 4,232 feet, a big gas well making some oil, completed about two years ago. The location is about 9 miles northeast of the Pettus Pool in Bee County.

Slick-Seeligson's No. 2 Poetter was abandoned at 4,300 feet. The No. 1 Poetter was the discovery well of the Slick Pool, 15 miles northeast of the Pettus Pool, in Bee County, at 4,212 feet.

Another effort is to be made in the Hord's Creek Pool. Sam Vanderweiss has made location for the No. 1 Kauffman 3,700 feet northeast of the northeast line of the B. Merrill Survey and 300 feet northeast of the northwest line of the Vincente Ramos Survey. The test abandoned by Slick-Seeligson is less than 1,000 feet south of the Zoch producer and the new location is about 3,000 feet east and 1,000 feet north of the Zoch producer.

Wildcat Operations in Southwest Texas

Week Ending November 5

ATASCOSA COUNTY

Company, farm and location—	Remarks:
American Central Oil Co.'s No. 2 Mary McConnell, 150 ft. W of E line, 300 ft. S of No. 1 Blk. 138, W. C. M. Baker Sur., 3 miles W and 6 miles S from Somerset	T.D. 1,660 ft.; rig moved off.

BANDERA COUNTY

F. A. Brown's No. 1 R. B. Watson, 600 ft. N of cen. of S line of Sec. 71	T.D. 330 ft.; drlg.
E. A. Parkford's No. 1 Duke, 200 ft. from S line, 150 ft. from W line of Sec. 7, G.C.&S.F. Sur.	Location.

BASTROP COUNTY

J. E. Emanuel's No. 1 H. Klemm, 817 ft. from W line, 300 ft. from S line of tract in R. S. Teal Sur.	Rigged up and standing.
Marts & Beaven's No. 2 Sloop, 1,200 ft. E of No. 1 Sloop, J. Burleson Sur.	T.D. 1,660 ft.; drlg.
Ogden & Reed's No. 1 Miers, beginning at the intersection of the C. L. Riddle and W. M. and Viola Riddle tracts, thence W 300 ft., thence S at right angles 150 ft. in W. H. Leech Sur.	Location.
Properties Trading Co.'s No. 1 Henry Freitag, 400 ft. from SE line, 1,800 ft. from NE line of P. Conley Sur.	T.D. 2,118 ft.; standing.
Teas and Gant's No. 1 Mikulec, 330 ft. to NW and SW lines of tract in Wm. Barton Sur.	Derrick.
Wilson & Edwards' No. 1 Randall, 150 ft. from S and E lines of tract in Bernard Bymer Sur.	Moving in tools.

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Two Exceptional Hancock County, Ohio, Wells; Seven New Producers in Kentucky Field

By GEORGE A. WHITNEY
Staff Correspondent, Central West Fields

FINDLAY, Ohio, Nov. 7.—Two exceptionally good oil wells were found in the Findlay Field of Hancock County which may bring about additional development in at least two townships. The better well was drilled by B. B. Porter in his No. 4 on the Byron B. and M. Porter farm, Section 29, Liberty Township, with an initial of 60 bbls. from the Trenton lime from 1,312-59 feet. The second was drilled by the Porter-Davis Oil Co. in No. 24 on the Myrtle E. Powell farm, Section 6, Eagle Township, same county, with an initial of 35 bbls., also in the Trenton from 1,321-49 feet. There is still much undeveloped land in the two townships to be tested.

In Sandusky County, Ballville Township, O'Brien and others' test on the C. J. Rice farm, Section 17, is reported too light and goes really as a dry hole. In Rice Township, same county, south of Oak Harbor and not far from Fremont, W. G. Montgomery, of Detroit, Mich., drilled a test on the Frank E. Miller farm, Section 31, some distance in advance of past development, and will drill three additional tests on a block of 900 acres, leased by Mr. Montgomery.

Grover Canwell is reported drilling around 1,200 feet on the Allen B. Rouston farm, Section 13, Pleasants Township, Hardin County.

In Wyandot County, Newcomer and others are drilling around 1,250 feet on the Albert Reber farm, Section 24, Pitt Township. Jones & Coyle are drilling around 400 feet in No. 2 on the Margaret Brillhart farm, Section 28, Crane Township, same county. McPheron and others are rigging up on the H. A. Walton farm, Section 21, same township. Ridge Oil & Gas Co. is drilling close to 1,000 feet on the G. G. Hiles farm, Section 7, Crawford Township, same county.

West of Toledo, in Monclova Township, Lucas County, Ross & George are reported drilling around 600 feet in a second test on the Sol C. Betts farm, Section 8, and Davis and others are shut down at 525 feet on the C. B. Halloway farm, Section 7, same township.

The Ohio Oil Co. is drilling No. 8 on the George W. Tabler farm, Section 9, Perry Township, Allen County, and unknown parties are drilling a second test on the Valentine Soherer farm, Section 35, Spencer Township, same county.

Mary V. Conzen is drilling on the C. E. Mercer farm, Section 14, Liberty Township, Wood County. Pember and Raydure are drilling deeper their test on the Ray and Ellsworth Wagner farm, Section 27, Jackson Township, same county.

CENTRAL OHIO

Nine completions were reported in the Central Ohio Field, three being oil wells with an initial of 13 bbls., one dry and five were gas wells, distributed in six counties.

In Ashland County, Faulkner & Phelps' No. 6 Guy Humm farm, Section 29, Mohican Township, produced 2 bbls. initially from the Berea sand at from 714-27 feet. Hulse and others are drilling No. 3 Howard E. Young farm, Section 15, Lake Township, same county. Meltzer and others are drilling No. 6 on the Clark Alber & Co. farm, Section 34, Mohican Township.

In Lorain County, the Ohio Fuel Gas Co. has a gas well in No. 1-5554 on the E. W. Armbruster farm, Section 22, Carlisle Township.

In Medina County, Harrisville Township, Barnhart and others' No. 12 on the Joseph Funk farm, Lot 6, is reported good for 10 bbls. from the Berea sand from 370 to 456 feet. Ohio Fuel Gas Co. has a light gas well in No. 1-5678 on the John C. Norton farm, Lot 10, same township. Colb and others' second test on the L. A. Severcool farm, Lot 1, Litchfield Township, same county, produced but 1 bbl. initially from the Berea at from 265-84 feet.

In Licking County, Mary Ann Township, C. C. Moore's No. 2 on the Stanton Wilson farm, Section 12, is a light gas well at from 733-83 feet.

In Muskingum County, Brush Creek Township, the Fritz Oil & Gas Co.'s No. 3 on the Edward Middleton farm, Section 10, was dry in the Big Injun sand at 1,025 feet. Pure Oil Co. is drilling No. 3 on the Scott-Hammond farm, Section 3, same township. Atha Oil & Gas Co. is drilling on the Hunter Atha farm, Section 12, Springfield Township.

In Stark County, the Plain Natural Gas & Heating Co. is shut down at 4,315 feet on the Frank Dix farm, Section 12, Jackson Township. East Ohio Gas Co. is shut down at 2,975 feet in No. 1 on the Frank S. Seil farm, Section 24, same township. Brendal Producing Co. is drilling No. 1 Albert Tesch farm, Section 22, same township. Same company has a rig on the S. and R. Givler farm, Section 7, Plain Township, same county, and East Ohio Gas Co. is drilling on the Hoover Co. farm, Section 18, Plain Township.

Barnhart and others are shut down for casing on the Hillside Country Club land, Section 4, Richfield Township, Summitt County, at 3,255 feet.

Wittmer Oil & Gas Co. is reaming hole at 3,420 feet in its test on the H. G. Reibel farm, Lot 90, Farmington Township, Trumbull County. Morse Oil & Gas Co. is drilling around 3,900 feet on the John E. McCamey farm, Section 3, Gustavus Township, same county.

In Meigs County, George Orndorff has a gas well in No. 2 on the Davidson farm, Section 6, Rutland Township.

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Cabell and Lincoln Counties, West Va., Busy; Small Producers in Southeast Ohio Area

By STAFF CORRESPONDENT

PITTSBURGH, Pa., Nov. 7.—Except for a fair producer in West Virginia, the eastern fields reported little of interest during the week. Four producers with an initial production of 60 bbls. were completed and in addition there were three gas wells and five dry holes.

SOUTHEAST OHIO

Completions eased off in Southeast Ohio but two oil wells being completed and a report of a dry test. The deep test of E. E. Grimm and Benedum & Trees on the Knowlton farm in Section 10, Independence Township, Washington County, remained shut down at 5,703 feet waiting on additional equipment to penetrate the hard formation at the bottom of the Oriskany.

In Medina County, F. E. Barnhard and others completed No. 10 in the shallow sands of Harrisville Township. It was on the J. W. Funk farm in Lot 6 and was completed in the Berea grit at 458 feet from which formation it produced 10 bbls. the first day after shot.

In Muskingum County, the Atha Oil Co. drilled in No. 3 on the L. M. Bryan farm in the northeast corner of Section 20, Perry Township. It was completed in the Niagara lime at a depth of 3,159 feet and made 10 bbls. natural the first day. The well has not yet been shot, in line with present-day curtailment demands.

In Knox County, W. J. Bonnett drilled a test on the William Engle farm in Section 30, Howard Township, through the Berea sand and found it dry. It was located outside of producing areas.

In Wheeling Township, E. C. Quillan and others are drilling on the E. E. Hamilton farm, Section 10, which is about due in the sand. In Fairfield County the Blum Oil & Gas Co.'s No. 3 on the J. J. McCandlish farm, Section 26, Rush Creek Township, is about due in.

WEST VIRGINIA

Two producers and three gas wells completed the total of the week in West Virginia. There were also reports of three dry holes. The best well was the test of Clem Morris and others on the Drake heirs farm on the waters of Leatherbark Creek in Murphy district, Ritchie County. The tools just touched the top of the Salt sand at 1,700 feet when it made a showing for a good producer. It produced over 30 bbls. of crude the first day with 700 feet of fluid in the hole and will be drilled in as soon as additional tankage can be set. It is about a mile off previous production.

In Harvey district, Mingo County, the Virginian Gasoline & Oil Co. completed its No. 25 on the Henry Closterman farm in Harvey district at 1,129 feet in the Maxon sand. After shot it produced 10 bbls. the first day.

Gas Wells

In Cabell County, which has become very active, J. W. Ramsey & Son completed a test on the Henry Taylor farm in Guyandotte district. It reached the Berea at 2,978 feet and is the smallest of recent wells in this district, showing for about 200,000 feet a day. In Kanawha County, Grosscup and others completed their deep test in Elk district and on the Samuel M. Burdette farm at 4,755 feet, the Brown shale. It is a very light gas well at that depth.

In Tyler County the Ohio Oil Co. drilled a test on the Frank Wilson farm in Meade district which is reported as a gas well, although details are lacking.

Dry Tests

At the head of Lost Run in Grant district, Ritchie County, B. F. Finley and others drilled a test on the George Blackburn farm through the Injun sand and found it dry. It was located 400 feet west of production on the Roscoe Richland farm.

In Pleasants County Albert Neeley & Co. had a dry hole on the Waldo Wagner farm in Union district. In the same district, Charles Kerr had a similar result in his No. 27 on the Allen Holdren farm.

Drilling in West Virginia

Cabell County and Lincoln County present the greatest amount of activity in West Virginia, at the present time. There, 13 wells are drilling, and other rigs are building and new locations made. In Lincoln County the latest test is that of the Bulger Gas Co. which is moving in tools on the Samuel Van Gundy farm in Jefferson district. In this district, R. H. Adkins and others have reached 2,400 feet on the J. O. Elkins heirs farm. In Union district, R. H. Adkins and others are down 1,650 feet in a second test on the Golza Bragg farm, and the Woodall Gas Co. is drilling at 1,225 feet in No. 4 on the James R. Adkins farm. In Washington district, the Harvard Gas Co. has spudded in and started drilling No. 3 on the Standard Fuel Gas Co.'s tract. In Sheridan district, the B. C. K. Gas Co. is past 2,000 feet on the Calvary Lunsford farm.

In Cabell County the latest test will be that of the Cisco Drilling Co. on the Ed Bull farm in Guyandotte district. A rig is now standing. In this district the Midway City Gas Co. is about due in the sand in its second test on the O. C. Morrow farm. The Huntington Brick Plant has passed the 1,300-foot level in a test on its own property. Swanson and Isaacs are drilling at 1,900 feet on the H. R. Wiley China Co. lease. Phillip Hager and others are down for casing at 1,300 feet on the Marshall College grounds. C. C. Wolfe and others have reached 550 feet on the Calhoun and Justice lease also in Guyandotte district. In Barboursville district, T. M. King, trustee, is down for casing on the Barboursville Clay Products Co. after reaching 1,550 feet. In McComas district, a new operation is the test of D. R. Campbell and others on the Gilbert Holton farm which has now reached 950 feet. In this district, D. H. Adkins and others are drilling on the M. and A. Williams farm which is past the 1,500-foot level.

In Logan County a new test is that of Roberts and Jarrett on the Hubert Ferrell farm in Chapmanville district. It has started drilling. The Cumberland Petroleum Co. has made a new location for its No. 8 on the Merrill Coal Co. tract in this district.

In Wayne County the Burgess Oil & Gas Co. is rigging up on the Robert Vaughn farm in Union district. In this

district, the Southern West Virginia Gas Co. is down for water in its test on the A. W. Preston farm.

In Calhoun County Creed Barker and others have started a new test on the Hugh Johnson heirs farm in Sherman district and which has just finished spudding in. In this district, the C. W. McCall Co. has started drilling their second test on the Hamilton, Jarvis and Garrett farm. W. S. Dailey and others have shut down for water in their old No. 1 on the G. T. Stump farm which is being drilled down to the Injun sand from the Salt sand. In Center district, W. H. Bickel has a rig standing for a second test on the George D. Starkey farm. In Washington County, Morris and Cain have the materials on the ground for a test on the John T. Miller farm. In Sheridan district, Leonard Cain and others have a test drilling on the Anna Amos farm which has passed the 1,600-foot mark.

In Monongalia County the Saint Leo Oil & Gas Co. has started drilling a test on the Mary Jane Straight farm in Battelle district. The State Line Oil & Gas Co. has resumed drilling its test in this district. In Gilmer County, A. E. Ellis and others have completed a rig for a second test on the Alice M. Ayers farm in DeKalb district, its No. 1 being a good producer. In Center district, C. W. McCall & Co. have started drilling a second test on the Fletcher Stout farm.

SOUTHWEST PENNSYLVANIA

No completions were made in Southwest Pennsylvania during the week. In Center Township, Greene County, the Duquesne Gas Co. drilled its test on the George W. and W. H. Scott farm to a depth of 3,541 feet, through the Gordon sand and it was void of production. In Springhill Township, James H. Null and others have passed the 2,000-foot level in their second test on the Elizabeth Rice farm.

In Washington County, which is fairly active, Campbell & Co. are down 2,000 feet on the J. S. Campbell farm in Mount Pleasant Township. In Hanover Township, G. Redall & Co. are drilling at 687 feet on the N. N. Arnold farm. In South Franklin Township, the Martin Oil & Gas Co. is down 700 feet on the Hiram McClain farm.

Wildcats

Little progress was made in the wildcat wells drilling in lower West Virginia and Virginia. In the Benedum & Trees test on the Pocahontas Coal Co. tract in McDowell County, West Virginia, the well was shut down for repairs at about 5,700 feet.

In Virginia the only progress made was in the Benedum & Trees test on the Clinchfield Coal Co. lease in Russell County where the depth is now past the 3,100-foot mark. In Wise County their test on the I. Kaufman farm is shut down cementing a cave at the depth of 2,400 feet.

Central West Field

(Continued from Preceding Page)

Frank Leifhoit and others have a gas well in No. 1 on the W. Harper farm, Section 35, Salisbury Township, same county.

KENTUCKY

Eleven completions were reported from the western Kentucky fields, seven being oil wells with an initial of 265 bbls., and four dry holes. The usual number of wells is under way and their completion will be rushed as fast as possible before winter.

In Ohio County, the Cumberland Petroleum Co.'s No. 11, on the David Brooks 120-acre farm, a mile west of the hamlet of Haynesville, produced an initial of 100 bbls. No. 12, same farm, is under way. H. A. Henry's No. 5 Nora Chambers farm, in the Haynesville Pool, is credited with an initial of 10 bbls., with No. 6 under way. Mecca Oil Co.'s No. 2, in the northwest corner of the F. V. Miller 60 acres, near Herbert, produced 5 bbls. initially. Clark, Snyder and others' test on the Ollie Wilson farm, 2½ miles north of Fordsville, was a dry hole. C. E. Daugherty's No. 3, on the John Bickett farm, in the Haynesville Pool, is nearing completion. Brenner & Adams are drilling No. 2 on the Kater Phillips 54 acres, 2 miles east of Haynesville.

In Daviess County, the Johnson Oil & Refining Co.'s No. 3 well, 600 feet from the north line and 575 feet from the west line of the B. S. Jenkins estate, in the Habit Pool, produced an initial of 25 bbls. at 937 feet. Newton Ross and others' test, on the John Trummek farm, is reported dry. Hupp & Duff's No. 4 well, 400 feet from the south line and 660 feet from the west line of the Martha Ann Sparks farm, in the Cane Run Pool, is dry at a depth of 720 feet.

In McLean County, the Ohio Oil Co.'s No. 5 on the G. B. McManama No. 2 farm, in the Calhoun Pool, is reported with an initial of 105 bbls. McLean Development Co.'s No. 3 on the G. B. McManama 150 acres, same pool, is a dry hole.

In Hancock County, Bolling & White's second test, 200 feet from the north line and 400 feet from the east line of the Preston Matthews east 40 acres in the Richard Hill Pool, produced 20 bbls. initially, and Hupp, Duff and others' No. 6 well, on the Alec Jackson 103 acres, produced 5 bbls. initially, and No. 7 is reported under way.

Showing of Gas and Oil in Michigan Extension

MOUNT PLEASANT, Mich., Nov. 7.—Only one well was reported completed, Pure Oil Co.'s No. 3 well, 330 feet from the south and east lines of the E. O. Harris and others' farm, in the S half SE NW, Section 15, Greendale Township, Midland County, which showed for a 50-bbl. initial producer, but after treatment increased its initial to approximately 800 bbls.

Great interest attaches to the Michigan Pacific Oil & Gas Co.'s test, 330 feet from the north and east lines of the Charles S. Hoyt farm, in the NW NW NE, Section 24, Jasper Township, Midland County. The well is nearing completion and a showing of gas and oil is reported to have been made in the Traverse formation. The Hoyt marks a new southwest frontier, being 10 miles west of Shepherd and 2 miles south of the boundary of Jasper and Porter Townships.

Michigan Gas & Oil Co.'s test on the B. Rayner farm, SW SW SW, Section 6, Lee Township, Midland County, is reported drilling around 3,400 feet. Theodore Oil Co.'s No. 1 well, 330 feet from the south and east lines of the McBain farm, in the SE SE SW, Section 1, Greendale Township, same county, is drilling close to the Dundee formation.

In Clare County, the Theodore Oil Co. is reported drilling around 2,300 feet on the Thompson Brothers' farm, SE SW NE, Section 35, Greenwood Township, and near Farwell. No gas was found so far, and it will drill to the Dundee formation to test the oil possibilities of that part of the field.

In Gratiot County, James G. Tiplady, trustee's test in the southeast corner of the Henry L. and Susan S. Laycock farm, in the SE SE NW, Section 11, Arcadia Township, landed the drive pipe at 380 feet and is drilling close to 500 feet.

Permits were issued, to Alvin C. Jones and Bernard E. Woodruff to drill No. 3 well, 990 feet from the south and east lines of the Jones-Woodruff farm, in the NW SE NW, Section 13, Greendale Township, Midland County; to the Pure Oil Co., for No. 1 well, 2,310 feet from the north and east lines of the Corwin A. Fergus farm, NE, Section 21, and the W half NW, Section 22, same township; and to C. W. Teater for No. 1 well, 990 feet from the north line and 330 feet from the east line of the Grace M. Hatch farm, in the SE NE NE, Section 8, Brooks Township, Newyago County.

A. S. Cochran is drilling a test 330 feet from the south line and 990 feet from the west line of the C. Hannum farm, in the SW NE, Section 31, Elbridge Township, Oceana County.

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Further Important Extensions to Conroe District; Good Showing in Deep Brazoria Wildcat

By NEIL WILLIAMS
Staff Correspondent, Gulf Coast Fields

HOUSTON, Tex., Nov. 7.—Further important extensions to the Conroe Field, additional expansion of development in that field, together with the encountering of a good looking sand in a deep wildcat on the Pledger prospect, northwestern Brazoria County, and promising showings in another wildcat in northern Harris County, were among the interesting high lights in Gulf Cost Field operations the past week. No abatement of drilling activity was apparent as additional new wildcatting got under way.

Of particular interest at Conroe was the entrance of the Tidal Oil Co. and the Tidal Refining Co. into the picture. The former company has virtually completed negotiations, it is reported, for the purchase of a half interest in G. W. Strake's 665.5-acre tract in the Charles B. Lewis Survey and also for certain properties of the Heep Oil Corp. In this connection Tidal Refining Co. is making surveys for the laying of a gathering system to connect these properties and possible additional properties which may be acquired.

Tidal Refining Co. at this time does not expect to enter the field as a purchaser but is laying the gathering system to handle present production on properties being acquired by the Tidal Oil Co. and what production the latter company may develop of its own in the future. The oil will be run, according to plans, through one of the two pipe line outlets to shipside where it will be moved by boat to the company's refining affiliations on the East Coast.

The Lewis tract being acquired is located directly to the south and to the west of the main part of the Conroe Field and is in direct line for important development. One well already has been started by Mr. Strake on the lease, this now being shut down at 2,300 feet pending completion of the trade. It is reported the deal is on a basis of $1,500 cash and $1,500 in oil per acre. Tidal Oil Co. is one of the several large Mid-Continent companies which recently have entered the Gulf Coast area and opened offices at Houston.

Conroe Extended

Production at Conroe was extended nearly a mile to the eastward by the completion early in the week of W. B. Hamilton's No. 1 Moorehead, L. A. Lang Survey, which came in flowing 500 bbls. daily, pinched in, from sand at a total depth of 5,100 feet. This makes the present productive limits 3½ miles wide, from east to west, and. including the Plummer & McDaniel Keystone Mills well, A. S. James Survey, located 4 miles southeast of the field, production extends approximately 9 miles in a southeasterly to northwesterly direction. A salt water well on the upper west side and several along the north have pretty well defined the area in those sections but otherwise the area is open for further extension.

Four other new wells were added to the rapidly swelling list of producers at Conroe. All these were inside wells except Humble Oil & Refining Co.'s No. 2 Dobbins, which marks a 2,500-foot southeastward extension of the main Conroe Field. Two more salt water wells also were abandoned, these being Albert Plummer's No. 1 South Texas Development Co. and Humble Oil & Refining Co.'s No. 13. South Texas Development Co., both on the extreme north end of the area.

Development to South

Interest at Conroe now is centered on the new development which is getting under way south of the field since the completion by Plummer & McDaniel of their No. 1 Keystone Mills two weeks ago extending production 4 miles southeastward. The same operators have started another wildcat in that district located 4,500 feet east on South Texas Development Co. land in T.&N.O. Survey No. 9. This test is located between the producer and a deep dry hole (Kraft & Giesieke's No. 1 South Texas Development Co., also in T.&N.O. Survey No. 9), which was abandoned several months ago.

C. C. Steinberger is starting another test, No. 1 South Texas Development Co., on a 35-acre lease which he owns in the T.&N.O. Survey, Abstract 568, which is the survey adjoining to the north the A. S. James Survey in which the Keystone Mills well is located. The location is 540 feet north of the south line and about three-quarters of a mile north of the extension producer and between it and the main field. Another test of particular importance will be Alpha Petroleum Co.'s No. 1 Keystone Mills, 466 feet from the north and east lines of that company's 200-acre lease in the Lemuel Smith Survey. This is over a mile to the south of the nearest production to the north and about the same distance west of the nearest producer to the east. A half dozen other new locations were made in and around the edges of the main part of the Conroe Field.

Brazoria County

Among the late developments was the encountering of a sand showing oil and gas in Danciger Oil & Gas Co.'s No. 1 W. C. Hunt, W. Coirson Survey, northwestern Brazoria County, a wildcat being drilled on the Pledger geophysical prospect. Approximately 20 feet of sand was encountered and with bottom of hole now at 6,767 feet preparations are being made to run casing to test. This is the first test drilled on the prospect, which was discovered in geophysical exploration by the Humble Oil & Refining Co. in 1928 and which recently was taken up by independents, "worked" again and turned to the Danciger Oil & Gas Co. for drilling. The showing was followed by a little play in royalties but most of these are tied up.

Harris County

In northern Harris County a small lease play has been under way around Indian Hill Oil Co's No. 1 Schweinle, William White Survey, as a result of showings of gas which have been encountered in this wildcat. A drill stem test was made in this test two weeks ago in a sandy shale formation from 5,514-80 feet which showed an estimated 3,000,000 feet of wet gas, it was reported. The hole since has been deepened to 5,631 feet in broken sand and shale and the bottom cores have a strong odor of kerosene. Gulf Production Co. has spent approximately $5,000 in the area paying $20 an acre. United Gas Co. also has bought a little over 1,000 acres a little further away paying a reported $5 an acre. Some small tracts also were taken up by independents but there is very little open acreage available.

Location of this wildcat is a little over 10 miles south of the Conroe Field of Montgomery County. The well encountered the Hockleyensis at 4,410 feet subsea, which, taking into consideration the dip from Conroe and scattered wildcats to the northward, was believed to be high. The horizon, in which the showings were encountered, is the Cockfield, this being topped around 5,330 feet subsea. This horizon is believed to be the same from which Conroe is producing.

Completions Reported

Completions during the week included two more good wells at Rabbs Ridge, Fort Bend County, and one at Starks, Calcasieu Parish. The latter was Gulf Refining Co.'s No. 31 Lutcher-Moore, which was brought in flowing 1,400 bbls. daily, through a one-half inch choke, with a pressure of 390 pounds from sand at a total depth of 3,698 feet. This is the first deep well which has been drilled by Gulf at Starks in several years. Although original production at this dome was in the deeper sands flanking the dome, more recent development has been in the shallow sands around 1,100-1,200 feet which overlie the dome.

Important Wildcat

Among new important wildcats started the past week was one by Humble Oil & Refining Co. on the Pierce estate in the Isaac Foster Survey, northeastern Matagorda County. This is on a geophysical prospect owned jointly with Gulf Production Co. and is the first test drilled. The location is a little over 6 miles to the southwest of Danciger Oil & Gas Co.'s No. 1 W. C. Hunt, wildcat on the Pledger prospect in northwestern Brazoria County, which was mentioned above as having picked up a sand showing oil.

In the McFaddin district of southwestern Victoria County, lower Gulf Coast country, Humble Oil & Refining Co. has abandoned its No. 1 Rudolph, John Kemper Survey. Bottom of the hole was 6,962 feet. Numerous sands were encountered by the test, some of which showed considerable gas but none considered worthy of commercial production. In the same district, The Texas Company has rigged up for its fifth test on the McFaddin ranch, this being located 1,300 feet westerly and 300 feet northerly at right angles from the southeast corner of the J. A. McFaddin 98-acre survey.

Gulf Coast Fields and Wildcats

Week Ending November 5

RACCOON BEND—AUSTIN COUNTY

Company, farm and location—	Remarks:
Humble Oil & Ref. Co.'s No. 8 Woodley, Wm. Harvey Sur., 2,380 ft. southeasterly along SE line from SW cor. of tract and thence 412 ft. northeasterly at right angles	Drlg. sand and sandy shale 2,795 ft.

DAMON MOUND—BRAZORIA COUNTY

Intercoastal Oil Co.'s No. 10 Wisdom, A. Darst Sur., 440 ft. from NW line and 170 ft. from SW line of tract	Drlg. shale and lime 2,420 ft.
Sinclair Oil & Gas Co.'s No. 3 Norton (W.O.), P. D. McNeel Sur., 230 ft. from NE line and 303 ft. from SE line of 150-acre tract	Pulling screen to work over 3,651 ft.
H. Wisdom's No. 1 Wisdom, 50 ft. from SE line and 75 ft. from SW line of Blk. 5, Lot A, A. Darst Sur.	Derrick.

BARBERS HILL—CHAMBERS COUNTY

Joe Bashara's No. 2 Tarbutton (D.D.), Henry Griffith League	Coring shale 4,370 ft.
R. B. Ferrell's No. 2 Wilburn, Henry Griffith League, 215 ft. W of No. 1 in center of 45-acre tract	T.D. 3,000 ft. in shale; fishing.
Humble Oil & Ref. Co.'s No. 1 Kirby, Henry Griffith League, 208 ft. from S line and 100 ft. from E line of lease	Drlg. salt 1,405 ft.
Mills Bennett Prod. Co.'s No. 5 Means, Henry Griffith League, 200 ft. W of No. 4	Drlg. salt 3,340 ft.
Mills Bennett Prod. Co.'s No. 5 Kirby, Henry Griffith League, 400 ft. from W line and 41 ft. from S line of tract	Drlg. rock 1,211 ft.
D. B. McDanlle's No. 6 Wilburn, Henry Griffith League, 240 ft. W of No. 5	Rig.
Moody Corp.'s No. 1 Collier (W.O.), Henry Griffith League, 47 ft. N line and 25 ft. from W line of tract	Drlg. sand 5,278 ft.
The Texas Company's No. 3 Lawrence fee, Henry Griffith League, 740 ft. W of E line in C of tract	Drlg. hard shale 893 ft.
The Texas Company's No. 2 Wilburn (W.O.), Henry Griffith League, 70 ft. from N line and 330 ft. from E line of tract	T.D. 5,225 ft.; cmtd. 4½-in. liner at 5,202 ft.; sealed off at 4,714 ft.
The Texas Company's No. 9 Wilburn, Henry Griffith League, 530 ft. E of NW cor. and 50 ft. S of N line	Derrick.
Texas Gulf Prod. Co.'s No. 4 Iffrey, Henry Griffith League, 894 ft. from E line in C of tract	Drlg. salt 2,015 ft.
Texas Gulf Prod. Co.'s No. 11-A Kirby, Henry Griffith League, 1,099 ft. from W line and 225 ft. from S line of "A" lease	Drlg. hard lime 5,092 ft.
Texas Gulf Prod. Co.'s No. 12-H Kirby, Henry Griffith League, 429 ft. W of No. 8-H and 65 ft. N of S line	Derrick.
Texas Gulf Prod. Co.'s No. 2 T. H. McLean, Henry Griffith League, 711 ft. from E line midway between C. Barber and McLean tracts on separating line	Drlg. hard lime 4,566 ft.
Texas Gulf Prod. Co.'s No. 3 Tarbutton, Henry Griffith League, 746 ft. from E line in C of tract	Cap rock 930-932 ft.; cmtd. 13⅜-in. csg.
Texas Gulf Prod. Co.'s No. 2 O. K. Winfrey, W. D. Smith Sur., 295 ft. N of SW cor. of A. E. Barber lease and 100 ft. W of E line of Winfrey lease	Drlg. rock 4,836 ft.
Mount Lee Oil Co.'s No. 4-A Zadie Fisher, Wm. Bloodgood Sur., 301 ft. from W line and 96 ft. from S line of tract	Drlg. hard sand 6,640 ft.

LOST LAKE—CHAMBERS COUNTY

Pure Oil Co.'s No. 18 Mayes, E. H. R. Wallis Sur. 1,425 ft. N and 1,429 ft. E of No. 1 Lost River	Drlg. shale and lime 3,195 ft.

ORCHARD—FORT BEND COUNTY

Gulf Prod. Co.'s No. 24 Moore, Mark Smith Sur.	Drlg. hard gummy shale 3,692 ft.

RABBS RIDGE—FORT BEND COUNTY

Gulf Prod. Co.'s No. 1 Edwards & Riggins, Samuel Kennedy Sur., 466.5 ft. E and 466.5 ft. N of SW cor. of SE 20-acre unit	Drlg. gumbo 954 ft.

(Continued on Page 59)

Largest Completion at Kettleman Hills in Months; Two New Wells in Buttonwillow Gas Field

By L. P. STOCKMAN
Staff Correspondent, California Fields

LOS ANGELES, Calif., Nov. 5.—Purchasers of crude oil are enjoying a little respite at present, but this temporary breathing spell between flow tests will be interrupted again November 15, at which time flow tests will be started at Huntington Beach to determine the field's true potential. The test which was scheduled to be started at Long Beach on November 1 was indefinitely postponed at the last moment because, it is reported, of insufficient funds. It appears entremely problematical whether the projected test involving Long Beach will be conducted in the near future. Major companies, in an effort to stimulate effective curtailment, have been considering several proposals during the past few weeks and it is expected that something definite will materialize within the next few days. It is reliably reported that one major buyer is considering the advisability of revising crude oil price schedules with the object in mind of adequately rewarding operators who are consistently observing curtailment. Under this plan, the producer would be paid a higher price depending upon the degree of effectiveness attained. Those who would rather produce wide open than curtail production 50 per cent would receive approximately one-half as much per barrel as the operator who restricts production to 50 per cent of his potential. Such a program would tend to equalize prices and consequently tend to stimulate effective curtailment. Whether this can be done, of course, only the future will tell. This plan has not yet progressed past the tentative stage, but it appears to have considerable merit if it can be successfully applied.

Umpire Pemberton reduced California's potential production of crude oil 6,600 bbls. per day as of November 1. The new potential daily production is 1,016,400 bbls., as compared with 1,023,000 bbls. during the preceding month. The allowable production for the state remains at 440,000 bbls. per day, as established some time ago by the Executive Committee for Equitable Curtailment. The potential of San Joaquin Valley fields was reduced from 516,400 bbls. per day to 511,100 bbls. per day. The potential of the Coastal districts was increased 200 bbls. per day, and the potential of Los Angeles Basin fields reduced from 375,000 bbls. to 373,500 bbls. per day. The potential of Kettleman Hills was cut from 265,000 bbls. to 260,000 bbls. per day, while Fruitvale was reduced from 13,000 bbls. to 12,325 bbls. The potentials of Elwood and Ventura Avenue showed slight changes, the potential of the former being increased 750 bbls. per day and that of the latter reduced 775 bbls. per day. The allowable daily production of Huntington Beach was increased from 18,500 bbls. to 19,000 bbls. per day, while the daily quota of the Playa Del Rey Field was reduced from 12,500 bbls. to 12,000 bbls.

Buttonwillow

Two new wells were finished in the Buttonwillow gas field of Kern County during the past week, the largest of which was the Milham Exploration Co.'s No. 2 Whittaker, bottomed at 2,600 feet and finished with a 6⅝-inch liner carrying 189 feet of perforated. This new well showed an initial daily production of 14,750,000 feet of natural gas through a 1-inch bean under a pressure of 890 pounds. The crew from this well, which was shut in immediately subsequent to completion, was shifted to No. 43 S. P., a new well which the Milham will drill in Section 1-28-22. The General Petroleum successfully completed No. 2 Morris, its second project in the Buttonwillow gas field, a few days ago, and it has been shut in until there is a sufficient demand for natural gas to justify production. No. 2 Morris registered an initial daily production of 10,000,000 feet from 2,494 feet, the hole having been finished with a 6⅝-inch combination string landed at 2,493 feet and cemented through perforations at 2,365 feet. This well staged a premature blowout a few weeks ago but was subsequently brought under control and the hole finished in an approved manner.

Kettleman Hills

The Union Oil Co. focused the attention of operators on the Kettleman North Dome Field this week by completing No. 2 Amerada King, flowing at the rate of 20,000 bbls. of clean 37 gravity oil and 30,000,000 feet of gas per day. This well, which is located in the extreme western part of the field, is the largest completion chalked up at Kettleman Hills in the last several months. The hole was bottomed at 8,500 feet and the 8⅝-inch water string landed and cemented at 7,038 feet. This well has been drilled in a little over five months at a cost well under $200,000. The North Kettleman Oil & Gas Co. expects to pick up the Whepley shale in No. 1 Lillis-Welsh within the next 100 feet, but is undecided as to whether a production test will be made above this point. It is quite possible that an open hole test will be made in view of showings found higher up in the hole. This project has not shown up as favorably as might be expected, but at the same time it cannot be classified as a dry hole. Drilling operations are under the personal supervision of Ed McAdams, and sponsors of the project contemplate the continuance of drilling in the event that production is not developed above the Whepley shale. No. 1 Lillis-Welsh was down approximately 9,500 feet a few days ago with the result that it is in a good position to exceed the present record for depth unless commercial production is developed above this point. The last string of casing landed in this well was 11¾-inch cemented at 6,710 feet. The Petroleum Securities is coring ahead in oil sand in No. 3 Felix at 8,250 feet and this well should be tanking oil within the next few weeks. The Kettleman North Dome Association's well No. 38-34-J, a deep test, is rotating ahead in a hard gray sand at 8,502 feet. This well has already passed through more than 2,000 feet of the Temblor and has looked rather favorable below the Whepley shale. Kenda has suspended drilling operations in No. 36-30-J, in the extreme western part of the field, at 9,303 feet. This project, located east of the North Kettleman Oil & Gas Co.'s No. 1 Lillis-Welsh, failed to show anything which might justify the expectation of development of commercial production, nothwithstanding that it is located relatively close to the axis of the structure at this point.

Lost Hills-Belridge

The Belridge Oil Co. got a wet job in No. 51-27, a drilling project in the North Belridge Field of Kern County at 5,112 feet and the 11¾-inch water string has been recemented under pressure. In Section 35-27-20, the Belridge Oil Co. has just spudded in No. 20 but should completed this project some time early in 1933. The Ohio Oil Co. is rotating ahead in No. 1 Bloemer in the North Belridge Field at 7,350 feet. This well, located outside the productive limits of the North Belridge Field as far as the Temblor is concerned, is being carried on down as a deep conclusive test. The Continental Oil Co. has just passed the 5,000-foot level in No. 3 Result and should be in a position to give this well a production test some time during the next 30 days. The Associated Oil Co. has not yet started preliminary work on No. 1 Williamson, a projected deep test to be drilled in the Lost Hills Field of Kern County, but is expected to do so in the very near future. This well, which will be drilled jointly by the Associated, Richfield, Standard, Universal Consolidated, Lincoln Drilling Co. and Ohio Oil Co., is expected to be started before the close of the current year. The Associated has surveyed location for this well but has not yet moved in any equipment.

Fruitvale

Drilling operations have shown a declining tendency in the Fruitvale Field during the past several weeks as operators are not quite as aggressive as was the case earlier in the year. Recent completions in this field have shown consistently declining initials, indicative of lower pressures and smaller ultimate production. The Petrol Producing Co. has resumed work in No. 1 Bloemer and the company will make a further attempt to develop commercial production. This well, located relatively close to the edge of the structure, will require careful work in order to exclude edgewater. The Kern Petroleum Corp. is believed to have got a wet job on No. 1 at 4,182 feet, although the crew is retesting the water shut off to make sure. The Petroleum Securities is making preparations to start drilling operations in No. 3 Coffee, a new well in the Coffee Canyon section of the Round Mountain Field, and the bit should begin making hole some time during the course of the next few days. This new well is an offset to the Chanslor-Canfield Midway Oil Co.'s No. 1 Coffee and is located in close proximity to the Golden Bear Oil Co.'s No. 4, which is making hole at 1,401 feet. In the Midway-Sunset Field of Kern County, the Standard is being temporarily delayed in No. 1 Mascot because of mechanical trouble, but should begin making new hole within the next few days. The Brookshire Oil Co.'s No. 13 in this district is rotating ahead at 3,625 feet.

There was no change in the status of wells in the Elwood Field of Santa Barbara County during the past week and there is little likelihood of any additional development during the rest of the current year. The Pacific Gulf Oil Co. is expected to chalk up a new completion in the Santa Barbara Mesa Field some time within the next two weeks as this well is standing cemented just above the pay. Oil sand was cored at 2,100 feet just before the water string was landed and if the structure at this point is free from water trouble the company should finish a 200-bbl. well. B. L. Webb has material on ground for a new well to be drilled on the Knott property and derrick construction will be well under way within the next 36 hours. In the San Maria district of Santa Barbara County the Union is cleaning out No. 51 Newlove, bottomed at 4,114 feet with a string of 8⅝-inch landed and cemented at 2,840 feet. The Union is also reconditioning No. 1 Folsom and No. 2 Coast, the latter being temporarily delayed with a fishing job at 3,680 feet. The General Petroleum is rotating ahead in No. 15-A Barnard, a projected deep zone test in the Ventura Avenue Field at 3,570 feet. This well was started with a large diameter hole in order to permit deep drilling. The Shell is starting a new test on the Taylor property in the extreme western part of the field and rig construction has just been started. In the Rincon Field the Indian Petroleum Co. is assembling material for a steel derrick to be erected on State tideland permit No. 82 and should consequently begin making hole some time within the next 15 days. This rig is being erected on an isolated pier

TANKER SHIPMENTS FROM LOS ANGELES TO DOMESTIC AND FOREIGN PORTS

	Oct. 22		Oct. 15			
	Total this week	Daily average	Total last week	Daily average	This year to date	Same time last year
Intercoastal-domestic—						
Crude oil	.....	.....	116,812	16,687	116,812	.....
Diesel and gas oil	.....	.....	.....	.....	763,622	1,473,198
Gasoline	117,880	16,840	.....	.....	6,676,555	11,332,062
Kerosene	.....	.....	.....	.....	154,372	187,934
Foreign exports—						
Crude oil	224,889	32,127	164,766	23,538	6,870,813	6,013,442
Fuel oil	83,164	11,881	131,132	18,733	6,749,845	11,163,985
Diesel and gas oil	115,845	16,549	23,545	3,364	2,048,627	3,015,941
Gasoline	160,432	22,919	211,231	30,176	6,886,909	7,106,739
Kerosene	170,361	24,337	50,291	7,184	2,542,310	1,396,048
Lubricants	.....	.....	.....	.....	.....	36,353
Naphtha distillates	.....	.....	.....	.....	120,075	.....
Coastwise-domestic—						
Crude oil	355,482	50,783	193,503	27,643	11,864,239	18,138,383
Fuel oil	284,426	40,632	126,509	18,073	9,644,654	10,786,137
Diesel and gas oil	20,131	2,876	16,105	2,301	1,015,520	1,250,455
Gasoline	500,364	71,481	177,596	25,371	12,458,455	11,630,949
Kerosene	.....	.....	1,328	190	133,421	267,382
Naphtha distillates	.....	.....	.....	.....	.....	4,952

TANKER SHIPMENTS FROM SAN FRANCISCO TO DOMESTIC AND FOREIGN PORTS

Intercoastal-domestic—						
Diesel and gas oil	.....	.....	.....	.....	556,606	.....
Gasoline	.....	.....	.....	.....	844,423	883,929
Kerosene	.....	.....	.....	.....	152,611	.....
Lubricants	.....	.....	.....	.....	23,829	35,236
Foreign exports—						
Crude oil	.....	.....	70,661	10,094	778,312	330,249
Fuel oil	73,021	10,432	32,960	4,709	904,079	1,348,607
Diesel and gas oil	.....	.....	.....	.....	519,332	482,708
Gasoline	97,029	13,718	169,730	24,247	3,259,601	3,757,305
Kerosene	.....	.....	114,628	16,375	882,858	783,732
Lubricants	.....	.....	.....	.....	30,094	25,693
Coastwise-domestic—						
Fuel oil	29,771	4,253	.....	.....	2,457,664	2,929,039
Diesel and gas oil	.....	.....	1,581	226	323,014	350,919
Gasoline	34,918	4,988	121,039	17,291	3,076,689	3,738,096
Kerosene	.....	.....	.....	.....	91,723	266,224
Naphtha distillates	.....	.....	.....	.....	.....	49,780

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located out in the open ocean and the outcome of work will consequently be watched with interest.

Dominguez

The Union Oil Co. successfully completed No. 10 Hellman in the Dominguez Field of Los Angeles Basin after redrilling and deepening the hole to 4,435 feet and landing a 4¾-inch liner carrying 65 feet of perforated. As a result of this reconditioning job, the well was returned to production flowing 295 bbls. of clean 29.5 gravity oil per day on a gas lift. In addition to recompleting this well, the Union staked location for No. 19 Hellman, a new hole which will be started some time within the next 10 days. The Republic Petroleum is still working on No. 1 Childs, an outpost in this field, in an effort to develop commercial production. This well, bottomed at 6,094 feet, is being plugged back by stages in the hope that some of the stringers of oil sand encountered may ultimately be found productive. In the Richfield district of Los Angeles Basin, the Forward Petroleum Co. made a preliminary production test on No. 2 Davenport at 3,786 feet but failed to complete the well as the hole is believed to have bridged over. The well started flowing approximately 75 bbls. of 31.0 gravity oil and about 2,000,000 feet of natural gas on the preliminary test but declined within a short time to a negligible amount. It is the general opinion that the company encountered a pocket of gas and will be obliged to install tubing and pumping equipment before completion.

Seal Beach

The Continental Oil Co. successfully completed No. 35 Bixby, a new well in the Seal Beach Field of Los Angles Basin, during the early part of the past week, after plugging back the hole from 6,604 feet to 6,535 feet and landed a 5½-inch liner carrying 514 feet of 100-mesh screen. This well, which was wet on a preliminary production test conducted about two weeks, was recompleted flowing 635 bbls. of 27.8 gravity oil cutting 1 per cent. The Continental has started reconditioning No. 33 Bixby, bottomed at 5,000 feet, as this well, for some reason or other, has shown an unexplainable increase in water during the past few weeks. It is believed that the water shut off on the 9⅝-inch is probably defective. The Barnsdall secured a satisfactory water shut off on No. 2 Trust, a deep well in the Rosecrans Field of Los Angeles Basin, but unfortunately ran into a fishing job resulting from the loss of the swab which was being run a few days ago. This well, located in the western part of the Rosecrans section of the field, is bottomed at 6,914 feet and has a string of 6⅝-inch landed and cemented at 6,182 feet. The importance which attaches to the significance of the production test being conducted on this well lies in the fact that the company has apparently discovered a new productive horizon. No. 2 Trust is an edge well at best and the result of the production test is therefore quite obvious. The Rosecrans Field is expected to become a hot spot some time during the course of the next month or two, although present enthusiasm may cool off a little if the Barnsdall fails to get substantial production in No. 2 Trust. This well correlates substantially below the deepest test heretofore drilled within the productive limits of the Rosecrans section of the field.

There have been several deeper tests drilled in the Athens, or northern extension of the Rosecrans Field, but if memory serves correctly, no well has been drilled below the 6,000-foot level in the southern part of the field. Correlation work indicates the probability that the new zone found in No. 2 Trust should be encountered just below the 6,000-foot level on the apex of the structure in the southern part of the field. Developments in this section of the field during the

IMPORTANT NORTHERN CALIFORNIA WILDCATS

Company, well, location—	S. T. R.	Depth	Status—
Standard, No. 1 Santa Rosa Island, Santa Barbara Co.	unsurveyed	3,980	gr. sd. drilling
Field Gasoline Co., No. 1 Lompoc, Santa Barbara Co.	6- 7-33	3,050	100 bbls.
Lee, W. M., No. 1 Lompoc, Santa Barbara Co.	28- 8-34	....	material
Superior Oil Co., No. 6 Santa Maria, Santa Barbara Co.	36-10-33	533	abandoned
Superior Oil Co., No. 7 Santa Maria, Santa Barbara Co.	27-10-33	612	core hole
Equity Oil Co., No. 1 Coal Oil Point, Santa Barbara Co.	24- 4-29	3,750	suspended
Bolsa Chica, No. 1 Coal Oil Point, Santa Barbara Co.	25- 3-29	4,089	testing
Deuel & Associates, No. 1 Naples, Santa Barbara Co.	7- 4-29	5,134	suspended
Oakburn Oil Co., No. 1 Capitan, Santa Barbara Co.	tideland	2,680	prod. test
Casitas Oil Co., No. 1 Carpinteria, Santa Barbara Co.	tideland	1,988	fishing
Cuyama Oil Co., No. 1 Cuyama, Santa Barbara Co.	12-10-27	1,688	br. sh. drilling
Cebrian & Perkins, No. 1 Cuyama, Santa Barbara Co.	27-10-26	mtl.	building rig
Woodrow Pet., No. 1 Rincon, Ventura Co.	4- 3-24	5,540	br. sh. drilling
Indian Pet., No. 1 Rincon, Ventura Co.	tideland	....	building pier
Sovereign Oil Co., No. 1 Fillmore, Ventura Co.	23- 4-19	160	cemented
Honolulu Consolidated, No. 1 Miguelito, Ventura Co.	23- 3-24	500	cemented
Wilshire Oil Co., No. 1 Sulphur Mountain, Ventura Co.	20- 4-21	861	br. sh. drilling
Superior Oil Co., No. 1 Timber Canyon, Ventura Co.	13- 4-21	5,790	sd. sh. drilling
Hardison & Temple, No. 1 Santa Paula, Ventura Co.	22- 4-21	219	suspended
International Oil Developers, No. 1 Conejo, Ventura Co.	33- 2-20	2,188	hd. sd. drilling
Las Posas Pet. Co., No. 1 Las Posas, Ventura Co.	22- 2-20	rig	suspended
Strobeck, G. L., No. 1 Ojai, Ventura Co.	34- 4-23	298	suspended
General Pet., No. 2 Buttonwillow, Kern Co.	6-28-23	2,494	10,000 M gas
Milham Exploration, No. 19 Buttonwillow, Kern Co.	8-28-23	2,600	14,750 M gas
Milham Exploration, No. 20 Buttonwillow, Kern Co.	1-28-22	rig	rigging up
Furman, T. H., No. 1 McKittrick, Kern Co.	22-29-21	4,610	suspended
Welport Oil Co., No. 2 McKittrick, Kern Co.	19-29-21	708	gr. sd. drilling
Ozena Oil Co., No. 2 McKittrick, Kern Co.	27-29-31	3,031	plug 2,943 ft.
General Pet., No. 1 Belridge, Kern Co.	30-28-21	8,260	suspended
Wallace, K. C., No. 1 Belridge, Kern Co.	32-29-21	4,222	suspended
Cumberland Oil Co., No. 2 Devil's Den, Kern Co.	17-26-18	3,263	suspended
Hallaway, A. S., No. 1 Devil's Den, Kern Co.	11-25-18	913	suspended
Hannah, Tom, No. 1 Devil's Den, Kern Co.	25-25-18	3,516	reaming
Pyramid Hills Oil Co., No. 1 Devil's Den, Kern Co.	24-25-18	2,100	gr. sd. drilling
Fowler, F., No. 1 Blackwell Corner, Kern Co.	15-26-19	3,170	suspended
Kingsburg Expl. Co., No. 1 Kingsburg, Fresno Co.	30-16-23	2,970	suspended
Graham & Loftus, No. 1 Raisin City, Fresno Co.	20-15-18	....	material
Kent & McDonald, No. 1 Carrizo Plains, S. Luis Obispo Co.	3-32-22	3,130	cleaning out
Emerich Oil Co., No. 1 Carrizo Plains, S. Luis Obispo Co.	22-32-22	1,841	suspended
Trav-El Oil Co., No. 1 Carrizo Plains, San Luis Obispo Co.	7-32-22	2,450	suspended
Indian Dome Oil Co., No. 1 Edna, San Luis Obispo Co.	26-31-12	3,352	suspended
Paso Robles Oil Co., No. 1 Edna, San Luis Obispo Co.	27-27-11	4,191	suspended
Schilling, C., No. 1 Atascadero, San Luis Obispo Co.	1-29-12	1,650	suspended
Shell, No. 1 San Miguel, San Luis Obispo Co.	4-25-12	3,112	sd. sh. drilling
Pacific Inland, well No. 1, Monterey Co.	19-23-15	2,441	suspended
Brown, W. F., No. 1 Parkfield, Monterey Co.	16-23-14	1,051	suspended
Guess, E. B., No. 1 Corcoran, Kings Co.	7-21-21	6,197	suspended
Woodward, Glen, No. 1 Dudley Ridge, Kings Co.	32-22-20	775	suspended
Scott Bros. Drlg. Co., No. 1 Dudley Ridge, Kings Co.	18-22-19	1,843	suspended
Irma Investment Co., No. 2 Dudley Ridge, Kings Co.	7-23-20	1,224	suspended
Triune Oil Co., No. 1 Dudley Ridge, Kings Co.	5-23-20	1,098	cleaning out
Dudley Dome Oil Co., No. 1 Dudley Ridge, Kings Co.	9-23-20	1,197	cleaning out
Eagle Oil Co., No. 2 Dudley Ridge, Kings Co.	15-23-20	1,342	suspended
Knudsen & Schmidt, No. 1 Reef Ridge, Kings Co.	36-23-17	5,812	cleaning out
Kettleman Ridge Oil Co., No. 1 Avenal, Kings Co.	10-23-16	1,148	suspended
Magee & Stone, No. 1 Alpaugh, Kings Co.	34-24-22	5,060	suspended
Western Resource Corp., No. 3 Dudley Ridge, Kings Co.	12-23-22	1,840	suspended
Ducor Pet. Co., No. 1 Ducor, Tulare Co.	14-24-27	2,200	suspended
Inland Valley Oil Co., No. 1 Visalia, Tulare Co.	24-17-24	2,092	suspended
Sheldon & Gholson, No. 1 Porterville, Tulare Co.	34-22-27	962	suspended
Hayman Oil Co., No. 1 Porterville, Tulare Co.	17-23-28	380	suspended
Ellis & Sanford, No. 1 Tulare Lake, Tulare Co.	20-24-23	1,490	suspended
Napa Oil Co., No. 1 Griffith, Napa Co.	7- 8- 3	3,240	sd. sh. drilling
Oakdale Oil Co., No. 1 Oakdale, Stanislaus Co.	5- 2-10	4,810	sd. sh. drilling
Hilderbrandt, R., No. 1 Crow's Landing, Stanislaus Co.	36- 6- 7	1,130	suspended
Rushing Oil Co., No. 1 Waterford, Stanislaus Co.	20- 3-13	2,644	sd. sh. drilling
Pacific Northern Co., No. 1 Guinda, Yolo County	23-12- 3	3,045	suspended
Bergman, Harry, No. 1 Dos Palos, Merced Co.	12-12-11	316	sd. drilling
Los Banos Pet., No. 1 Los Banos, Merced Co.	36-10- 9	rig	suspended

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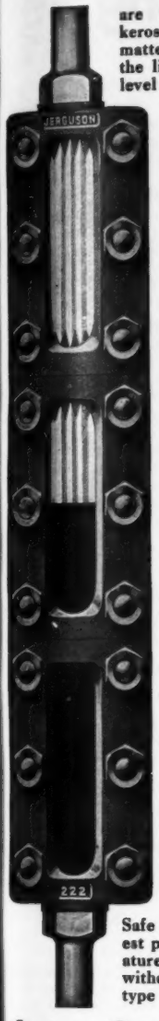

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Read the Classified Ads on page 71

past 30 days have changed the status of a number of leases, several of which were about to be surrendered as unproductive. Rosecrans will probably not cause any great disturbance in the production situation in the event that deep drilling results in new production, but at the same time it may have a tendency to aggravate the situation and retard recovery. Due to their lease holdings, the Barnsdall and Union will be the principal beneficiaries of deep drilling, although both companies would like to hold back development until a more opportune time. The Rosecrans Field has been relatively inactive during the past several years, but appears due for a revival of work. There are two or three deals pending which will result in the transfer of leases and if negotiations are successfully concluded we may anticipate either the redrilling of several present producers or the starting of two or three new wells within the next 30 days.

Long Beach

Although there is very little new development in the Long Beach Field of Los Angeles Basin, there are a number of reconditioning jobs under way at the present time. Some of these wells are being cleaned out, but as a rule most of the wells being worked over are either being deepened to lower horizons or plugged back to upper zones. The work appears to be spread fairly equal throughout the field, although the Frog Pond area is perhaps a little more active than any of the other sections of the field. The Dabney-Johnston Oil Corp. successfully completed No. 83 Signal during the early part of the week and this new well, bottomed at 7,587 feet, was brought in pumping 106 bbls. of relatively clean 26.7 gravity oil per day. The General Petroleum is reconditioning a number of former producers in this field at present and will probably finish one or two of these wells within the next few weeks. The company is at present working on No. 2 Boyle Perry, No. 2-A Scoco and Nos. 1 and 6 on the K. & H. lease. The George F. Getty Co., Inc., recently recompleted No. 26 Long Beach flowing 248 bbls. of relatively clean 27.2 gravity oil per day from 5,545 feet. This company is at present cleaning No. 19 Long Beach at 6,650 feet. The Standard should complete two new wells in the West Coyote Field of Los Angeles Basin within the next 30 days, as Nos. 111 and 112 on the Murphy Coyote property are nearing the completion depth. The Inglewood Field, which looked rather hot a few months ago because of the possibility of deep zone exploitation, is back on a normal basis due to the inability of operators drilling edge wells to develop commercial production. Several deeper productive zones are known to exist in the Inglewood Field and it is quite obvious that if edge production had been developed this work might have made it necessary for operators holding adjacent acreage to drill offset wells. One outpost is being drilled in the Playa Del Rey Field and a steel rig has been erected for a second test at the base of the Del Rey Hills in the extreme eastern part of the field. This work is not of any particular consequence, however, as it is somewhat removed from the town lot area and would therefore require only a few offset wells in the event that commercial production was developed. M. Shallemiller is rigging up portable equipment to validate tideland permit No. 194 in the Huntington Beach Field of Los Angeles Basin but this work is more or less of a secondary nature as the validation hole will not be carried deep enough to pick up the pay unless present plans are ultimately revised.

Raisin City Wildcat

The Graham & Loftus Oil Corp. has material on ground for a wildcat to be drilled near Raisin City in Fresno County and reports indicate the probability that the bit in this test will begin making hole before the close of the current month. This projected wildcat is of more than passing interest in view of an exploration campaign conducted in this area by the Associated Oil Co. several years ago. The Associated got some fairly good looking showings in one of its tests drilled near Raisin City but finally quitclaimed its leases upon the failure to get commercial production. The new test of the Graham & Loftus Oil Corp. will be watched with interest in view of the Associated's previous exploration work in this immediate area. The Pyramid Hills Oil Co. is getting some good acetone cuts in its No. 1 in the Devil's Den region of Kern County at 2,080 feet and this well may bear watching during the course of work in the next few weeks. There is a possibility that this company has picked up the Temblor although this fact has not been definitely determined. In the Lompoc district of Santa Barbara County the O. C. Field Gasoline Corp. has completed No. 1 McLean pumping 100 bbls. of heavy 14.9 gravity oil per day from 3,052 feet. This well, which was shut in immediately subsequent to completion, was finished with a 6⅝-inch liner carrying 595 feet of perforated. The Bolsa Chica Oil Co. is contemplating the advisability of drilling a second test on State tideland permit No. 191 in the Coal Oil Point area of Santa Barbara County, but no definite decision has been reached in this respect. Bolsa Chica's No. 1-A is flowing about 100 bbls. of salt water and a small quantity of 36.0 gravity oil from 4,089 feet. The production of this well tends to indicate the possibility that the initial project in this area is an edge well as the initial production test showed evidence of both oil and gas in small quantities. It may be possible, of course, that the showings found in this well may be a little stringer from the Elwood Field, located approximately 4 miles to the west. It would seem that another well could be justified in the Coal Oil Point area, provided of course that the additional expenditure could be made without any sacrifice. In the Carpinteria district of Santa Barbara County the Casitas Oil Co. is temporarily held up.

IMPORTANT SOUTHERN CALIFORNIA WILDCATS

Company, well, location—	S.	T.	R.	Depth	Status—
Hines Pet., No. 1 Ocean Park, Los Angeles Co.	9-	2-	15	7,414	suspended
Taylor Oil Co., No. 1 Culver, Los Angeles Co.	12-	2-	15	6,238	suspended
Co-operative Dev. Co., No. 1 Del Rey, Los Angeles Co.	26-	2-	15	5,770	sd. sh. drilling
Del Rey Hills Corp., No. 1 Del Rey, Los Angeles Co.	26-	2-	15	rig	suspended
Palm Ridge Oil Co., No. 1 Palms, Los Angeles Co.	2-	2-	15	2,124	suspended
Lawndale Pioneers, Inc., No. 1 Peck, Los Angeles Co.	20-	3-	14	6,378	suspended
Baldwin Oil Co., No. 9 Inglewood, Los Angeles Co.	7-	2-	14	5,696	drilling out
Baldwin Hills Synd., No. 1 Inglewood, Los Angeles Co.	17-	2-	14	4,090	suspended
Kyle, W. A., No. 1 Inglewood, Los Angeles Co.	7-	2-	14	4,316	suspended
Pacific Inv. Co., No. 1 Wilmington, Los Angeles Co.	28-	4-	13	rig	suspended
El Dorado Oil Co., No. 1 Puente, Los Angeles Co.	30-	2-	9	2,860	suspended
Jones, W. L., No. 1 Lynwood, Los Angeles Co.	31-	2-	12	4,070	sd. sh. drilling
Blinn & Gray, No. 1 Montebello, Los Angeles Co.	6-	2-	11	5,060	suspended
Hutcheson & Andrus, No. 1 El Monte, Los Angeles Co.	11-	1-	11	1,010	sd. sh. drilling
Yellowstone Oil Co., No. 1 Alhambra, Los Angeles Co.	24-	1-	13	3,919	suspended
Smith, J. H., No. 1 Hasley, Los Angeles Co.	32-	5-	17	3,212	redrilling
Superba Pet., No. 1 Newhall, Los Angeles Co.	11-	3-	16	214	suspended
Sanbar Pet. Co., No. 1 Newhall, Los Angeles Co.	35-	5-	16	1,020	sd. sh. drilling
Ball, W. T., No. 1 Newhall, Los Angeles Co.	34-	3-	15	3,470	cleaning out
Security Dev. Co., No. 1 Newhall, Los Angeles Co.	31-	5-	14	416	suspended
Ajax Pet., No. 1 Newport, Orange Co.	21-	6-	10	7,259	suspended
Nuoil Co., No. 1 Newport, Orange Co.	29-	6-	10	1,970	suspended
Mineral Exploration, No. 1 Capistrano, Orange Co.	8-	8-	7	3,790	suspended
Orangethorpe Pet., No. 1 Brea, Orange Co.	32-	3-	10	4,560	suspended
Shallemiller, M., No. 1 Huntington, Orange Co.	35-	2-	11	...	portable rig
Spindletop Oil Co., No. 1 Salton Sea, Riverside Co.	25-	7-	10	3,590	suspended
Duncan, N. I., No. 1 Sagebrush, Riverside Co.	8-	4-	6	1,157	suspended
Colan Dev. Co., No. 1 Redlands, San Bernardino Co.	25-	1-	2	2,392	suspended
Great American Pet., No. 1 Chino, San Bernardino Co.	18-	2-	8	203	sd. sh. drilling
Mason Oil Co., No. 1 Salton Sea, Imperial Co.	1-	17-	15	680	suspended
Woods, D. H., No. 1 Salton Sea, Imperial Co.	7-	11-	16	774	suspended
San Felipe Oil Co., No. 1 Borega, San Diego Co.	25-	11-	8	494	suspended
South Bay Oil Co., No. 1 Border, San Diego Co.	31-	18-	2	1,243	suspended

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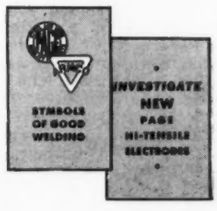

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Possible New Pool in Weld County, Colorado, May Result From Dakota Sand Showing

By TOLBERT R. INGRAM
Staff Correspondent, Rocky Mountain Area

DENVER, Colo., Nov. 7.—The Ramsey Petroleum Co.'s No. 1 Tighe, 13 miles northeast of the Greasewood Pool in northeastern Colorado, came in for 6,300,000 feet of gas in the top of a sand of the Dakota series and appears to be turning gradually to oils. It opens a new prospecting territory where the major companies have blocked the acreage almost solid.

The Shell Petroleum Corp. is making a test in its No. 3-B McKinley in the Hobbs Pool in New Mexico in a saturated horizon just above the regular pay. Several Hobbs wells are due for completion within the next few days. One well was completed for 15 bbls. per day in Eddy County.

The Texas Company is preparing to make a drill stem test of the Muddy horizon in its Alkali Butte test in Fremont County, Wyoming. The Mutual Oil Syndicate's No. 27, in the Dutton Creek Field in Carbon County, was completed for 750,000 feet of gas and one new operation was started.

In Montana, the Montana Power Co.'s No. 1 Simereo, 4 miles to the southeast of the nearest oil well in the Cut Bank Field, is showing for a producer and indicates an important extension of that pool. Two other wells in that district are due for completion.

One well was abandoned in South Dakota, a rotary test is being started in Oregon, and the Ohio Oil Co.'s test in Washington is drilling in basalt at 6,001 feet.

NEW MEXICO

Lea County

Several wells in the Hobbs Pool are scheduled for completion within the next few days. One of the most interesting of these is the Shell Petroleum Corp.'s No. 3-B McKinley, SW cor. Section 20-18-38, in the northern part of the field, which stopped at 4,085 feet to make a test of a sandy zone which showed considerable oil in the cores. The 3-inch tubing will be run and after the test is completed the well will be killed and drilled deeper. The Shell company's No. 3 McKinley, SE cor. Section 19-18-38, a west offset to No. 3-B McKinley, is a revived location. Rig building was started more than two years ago when the location was temporarily abandoned.

The Repollo Oil Co.'s No. 2 Grimes, SW SE NW Section 28-18-38, cemented the 15½-inch at 238 feet with 200 sacks and is drilling in the red beds at 800 feet. The Humble Oil & Refining Co.'s No. 1-B Powers, NW cor. Section 29-18-38, is shut down for bit at 4,095 feet. It topped the white lime at 4,068 feet and will be an early completion. The same company's No. 2-B Bowers, SW NW SE Section 20-18-38, is still a location. The Getty Oil Co.'s No. 5 McKinley, NE cor. Section 30-18-38, is drilling in salt at 1,900 feet. It topped the anhydrite at 1,498 feet. The Amerada Petroleum Corp.'s No. 2 Boon Hardin, SE cor. SW Section 18-18-38, topped the anhydrite at 1,535 feet and is drilling in that formation at 1,650 feet. The Gypsy Oil Co.'s No. 2 East Grimes, C SE NE Section 33-18-38, is drilling at 4,020 feet in lime. It topped the Terry at 3,988 feet and the pay at 4,009 feet. The same company's No. 1 Hardin, SW cor. SE Section 18-18-38, is bottomed at 2,820 feet in anhydrite and stopped to cement the 9⅝-inch at 2,816 feet with 500 sacks. The Midwest Refining Co.'s No. 29 State, C SW NW Section 10-19-38, is drilling at 2,935 feet. It topped the salt at 1,780 feet. The same company's No. 11 Byers, C NE NW Section 3-19-38, topped the salt at 1,808 feet and is drilling at 2,795 feet in anhydrite. Its No. 11-X Turner, NE cor. SW Section 34-18-38, is bottomed at 972 feet in the red beds and set the 16-inch at 228 feet with 75 sacks.

In the Lea area, The Texas Company's No. 1-B Lynch, C SW NW Section 34-20-34, is bottomed at 1,160 feet and is redrilling at 880 feet after cementing back the third time to straighten hole. Same company's No. 2-A Lynch, C SE SE Section 34-20-34, is rigging up cable tools.

In the Lovington area northwest of the Hobbs Pool, the Western Drilling Co.'s No. 1 State, NE cor. SE Section 13-17-36, is drilling at 3,750 feet in anhydrite after setting the 8¼-inch at 3,490 feet (cor.).

Eddy County

Flynn, Welch & Yates' No. 63 State, SE cor. NW Section 10-19-28, in the southeastern part of the Artesia area, was unable to recover two lost bits in the hole at a total depth of 2,196 feet and completed it at that depth. Tubing was run to 2,108 feet and it is pumping 15 bbls. per day. The same firm's No. 64 State, SE NE NW Section 10-19-28, two locations to the north, is spudding at 30 feet, and its No. 65 State, NE SE SE Section 30-18-28, is still a location.

Leonard & Levers' No. 8 State, C SE Section 21-17-28, Jackson area, is drilling at 2,280 feet in lime. It had approximately 500,000 feet of gas per day at 2,265-80 feet. The Pecos Valley Gas Co.'s No. 7 Vandagriff, SE NW SE Section 5-17-28, is rigging up drilling machine.

In the Compton area to the southwest of the Artesia Pool, Finley, Woods & Brainard's No. 5 Brainard, C NW SW Section 5-18-27, is bottomed at 1,100 feet. The 10-inch was set at 992 feet and the 8¼-inch at 1,076 feet. An effort is being made to pull the 12½-inch. W. A. Scott's No. 1 Kaiser, NW SE Section 7-18-27, is drilling at 1,627 feet. It had a good show of oil and a flow of gas estimated at 100,000 feet per day at 1,620-27 feet. R. Spearow and others' No. 1 McClelland, SW NW NE Section 22-22-23, west of Carlsbad, is drilling at 650 feet in lime. It had water at 593 feet, but the well did not flow, the water apparently draining off into a cavity.

Chaves County

R. D. Compton's No. 1 Emerson, SW cor. SE Section 20-10-24, near Roswell, is shut down at 1,730 feet in the red beds while the drillers went deer hunting. Warman Oil Trust's No. 1 Weldon & Hoar, NW cor. SE Section 9-14-25, Blackdom district, is drilling at 100 feet in red sand.

De Baca County

The Landowners Oil Co.'s No. 1 State, SW cor. NE Section 16-1s-27, Buffalo Creek, is drilling at 5,220 feet in lime.

WYOMING

Fremont County

An important test in Fremont County at an interesting stage is The Texas Company's No. 2 State-Ridgway, SE SW SW Section 36-34-95, on the Alkali Butte Dome. It is shut down at 4,263 feet, apparently between the Muddy and Dakota, and preparing to make a drill-stem test of what is believed to be the Muddy horizon. This formation was cored for 17 feet, but no core was recovered and it is not known just what results may be expected. This well is located a little to the east of a test drilled two years ago by the same company. It encountered gas and some oil in the Dakota and went below that horizon, but the gas pressure gave considerable trouble and the hole was plugged back to the Dakota and completed as a gas well. The present test is being drilled with a rotary.

The Ward Oil & Gas Co.'s No. 2, NE cor. Section 28-34-90, Dutton Basin, is still bottomed at 4,150 feet and fishing for bit. The Big Four Oil Co.'s No. 4, SE NW Section 27-3n-1w, Pilot Butte, is testing the first Frontier sand at 794 feet. It is estimated good for 25 bbls. flush production. Same company's No. 5, on the same tract, is spudding. This company, which recently was formed to take over the Enos tract of 81 acres formerly held by the Delta Oil Co., is preparing to erect a skimming plant with a capacity of 35 bbls. per day. The Yellowstone Oil Co.'s No. 1 Gabus, SW cor. Section 14-38-94, near Shoshoni, is bottomed at 2,210 feet and pulling pipe to ream down after standardizing. The operation was delayed by an accident in which W. J. Whinnen, a driller, broke an arm while working on the derrick.

Sweetwater County

The Wyoming-California Petroleum Co.'s No. 1, SE SE Section 23-17-104, South Baxter Basin, is fishing for bit at a total depth of 4,050 feet. At 3,917 feet it was still in the Morrison and showing some gas. The Mountain Fuel Supply Co.'s No. 1 Mullen, SE cor. NW Section 2-17-104, is standing with the 6⅝-inch cemented on top of the Dakota at 2,282 feet. It is an old producer in the Frontier being deepened.

Carbon County

The Mutual Oil Syndicate's No. 27, NW SE NE Section 12-18-78, Dutton Creek, was completed as a gas well in the Shannon sand at a total depth of 1,831 feet and is estimated at 750,000 feet per day, open flow, with a rock pressure of 500 pounds. Rig is being moved a mile north for No. 26-C, NW SE NE Section 1-18-78. This is to the north of the two oil producers in the Muddy sand at 4,900 feet and was spotted so as to feel out the productive area for gas in the Shannon sand. The company proposes to supply natural gas to the Laramie Gas Co. for distribution in the town of Laramie. The Ohio Oil Co.'s No. 1 Carbon, NW Section 18-18-77, to the southeast of the last completion, is drilling at 1,454 feet with portable rotary.

The Lost Soldier Producing Co.'s No. 1, NE NE Section 25-26-88, Mahoney Dome, is drilling at 4,150 feet supposedly on top of the Nugget sandstone in the base of the Sundance. It has a show of oil and gas.

Natrona County

The Mutual Oil Syndicate's No. 2, C SW SE Section 14-35-79, Midway Dome, cleaned out to bottom at 6,075 feet after shooting the Muddy sand with 15 quarts. The well started flowing, but no gauge was taken. It probably will make around 200 bbls. It probably will be deepened 1 or 2 feet before completing. It is then planned to drill another test to the southeast of the discovery well.

Peter Evanoff's No. 2, SW Section 3-39-79, shale area west of Salt Creek, is drilling at 1,080 feet. The Empire State Oil Co. is starting a well in the Poison Spider Field in the NE Section 12-33-83. The Summitt Oil Co.'s No. 1 Trewitt, NW cor. Section 21-33-80, North Platte, is drilling at 1,690 feet and is supposed to be about on top of the Muddy sand.

Converse County

The Continental Oil Co.'s No. 30 Glenrock Sheep, SW SE SE Section 4-33-76, Big Muddy, a test to the Sundance, is bottomed at 4,713 feet and drilling out plug after cementing off a cave. The Ohio Oil Co.'s No. 25 Kinney, SE SW S.. Section 4-33-76, shut down at 4,320 feet after swabbing 30 bbls. per day from the Lakota. No more work will be done on this well until No. 26 Kinney, a few feet away, is completed. The latter, which is being drilled to a stray sand which showed considerable oil in No. 25, is coring at 1,524 feet.

Platte County

T. R. Oberman's No. 1 Diamond ranch, NW SE Section 30-21-68, 14 miles west of Chugwater, is spudding at 32 feet after skidding rig.

Niobrara County

The Globe Petroleum Co. is reported by a Lusk paper to have been served with papers in 11 suits filed in the district court, of which two were attachment cases and nine were to quiet title. This company is supposed to be the holding concern for the Interstate Oil & Refining Co. and the Fall River Royalty & Producers Co., operating in the West Mule Creek Field. Recent inquiries by the writer for information concerning this operation were not answered.

Sheridan County

The R. & D. Oil Co., which has its No. 1 Mock, NW cor. SE Section 21-57-87, Smith Creek, down to 1,590 feet, is reported reorganized and capital increased from $50,000 to $250,000. E. L. Dana is the new president; John W. Songer, vice president; V. C. Johnson, secretary and treasurer, and Orville Pfeiffer, general manager. Pfeiffer has taken a contract to complete the well, but operations are not expected to start until spring.

Weston County

The Federal Oil Co.'s No. 4, NE SE SE Section 15-46-64, in the Osage Field, flowed 250 bbls. the first 24 hours after being shot and cleaned. The Tug Oil Co.'s No. 2, NE NW SW Section 15-46-64, was deepened to 3,060 feet without picking up anything additional and will be abandoned. It had sulphurous salt water in sand at 2,875-89 feet.

Routine Osage operations include the following: Riggs Oil Co.'s No. 2, SE NE Section 16-46-64, is drilling at 3,070 feet, and the Paymac Oil Corp.'s No. 1 Toyne, SE NW NE Section 3-46-64, is drilling at 1,400 feet. The M. S. & W. Oil Co.'s No. 13, SW SE NW Section 30-46-63, is waiting after cementing the 8¼-inch at 400 feet, and Albert Jones' No. 3, NW cor. SE Section 21-46-63, is shut down at 400 feet. Sandell and others' No. 2, SE SW Section 12-46-64, is drilling at 1,300 feet, and the Lincoln Oil Syndicate's No. 1, SW cor. SE Section 10-46-64, has rig on location. The Chadron-Osage Oil Co.'s No. 18, NW SW SW Section 14-46-64, is drilling at 700 feet.

Julius Peters and others' No. 1 Witzell, SE cor. NW Section 30-46-64, Fid-

dler Creek, is bottomed at 4,590 feet and pulling pipe to clean out bridge.

Park County

Henderson Producing Co.'s No. 10, SW NE NE Section 31-58-99, South Elk Basin, topped the second Wall Creek at 1,820 feet. The gas cleaned the hole. Bradenhead and valves are being set. The pipe will then be underreamed from 1,794 feet to bottom and set before drilling in. The well is located in a fault block south of the Elk Basin Field.

Big Horn County

The receiver for the Allen Oil-Montana-Wyoming properties on the Garland Dome has taken over same and is now in charge. As soon as title litigation is settled it is expected that the drilling of No. 1, Lot 52, Section 33-56-97, to the Madison lime will be started.

Hot Springs County

Empire State Oil Co. is drilling at 147 feet on NE NW Section 14-44-98, Hamilton Dome. It will go to the Embar.

COLORADO

Weld County

Northeastern Colorado sprang into the limelight again this week when the Ramsey Petroleum Co.'s No. 1 Tighe, SW NE SE Section 15-7n-59, in the New Raymer-Buckingham district in Weld County, 13 miles northeast of the Greasewood Pool and 25 miles north and a little west of Fort Morgan, came in as a gas well. The gas is very wet and the well is being allowed to blow to clean itself and possibly drill itself in as an oil well. R. M. Franks, vice president of the Ramsey company, said the well is performing very much like producers in the Oklahoma City Field and that he is confident it will come in as an oil producer. The geologists are about equally divided as to whether the gas is coming from the Muddy or Dakota sand of the Dakota series.

Corrected figures give the total depth at 6,695 feet and the top of the sand at 6,686.5 feet. The 6⅝-inch was set at 6,684 feet. The drillers say that after the plug was drilled out and before unloading began the hole was drilled 3.5 feet into the sand, making allowances in this calculation for the stretch of a new drill stem which was used in drilling out the plug. Gas began showing through the drilling mud shortly after bailing started. Approximately 3,200 feet of fluid had risen in the hole when the bailer was blown out and the hole cleaned itself. The well was shut in Tuesday night, but no facilities were available for a reliable test. Wednesday afternoon an impromptu apparatus was rigged up and this indicated a flow of 6,300,000 feet per day with approximately 1,800 pounds pressure. The gas at first was a light colored mist but at last reports had turned to a greenish brown and was spraying a little crude oil and distillates which tested 58 degrees gravity. Rigging up is in progress to make a test. It is not yet known whether it will be drilled deeper at this time. Official reports do not confirm the drillers' estimate of 3.5 feet of new hole being made.

The differences in opinion regarding the horizon arise largely from various interpretation of drilling data. The Timpas lime, the customary marker, was not cored and its exact location is not certain, several sets of figures being used. One calculation places the horizon just where the Muddy might be expected, while another, equally reliable, can be construed as indicating the absence of the Muddy and the producing horizon to be the Dakota. The Muddy is the producing horizon at Greasewood and the Dakota so far drilled in that field contained water. The Muddy is a lenticular sand and the Dakota is a blanket sand. If the Ramsey well is in the latter, the discovery is considered of far greater importance. The Ramsey well is estimated to be around 250 feet higher than Greasewood.

The New Raymer-Buckingham district is leased almost solid from Greasewood towards the northeast. The California Co. is the largest holder with a block of 28,000 acres. W. L. Christiana and the Centennial Plains Corp. have jointly 10,000 acres. The Fort Morgan Oil Co. has 20,000 acres in a block 8 miles to the southeast. The Texas Company, the Magnolia Petroleum Co., Ohio Oil Co., Continental Oil Co. and the Ramsey Petroleum Co. are among the principal holders. Tulsa-Fort Morgan Petroleum Corp. has a block 5 miles to the north with a well down 3,320 feet. A deal is pending to carry this well on down. The Ramsey block around its test embraces 6,800 acres. The discovery is certain to lead to additional drilling and the probability that some of this will start this winter. Manning & Terry, contractors, who drilled the Ramsey test, have an interest in that operation as has also the Greeley Oil Co., which furnished the rig and equipment.

In the Greasewood area, the Ohio Oil Co.'s No. 1 Butters, C SW SW Section 7-6n-60, has plugged back from the Dakota to test the Muddy, topped at 6,683 feet, and is running tubing. The Reiter-Foster Oil Co.'s No. 1 Ida Johnson, C

(Continued on Next Page)

Important New Test Being Started in Alberta On Two Hills Structure East of Edmonton

By VICTOR LAURISTON

Staff Correspondent, Canadian Fields

CHATHAM, Ontario, Nov. 5.—In the Alberta fields, an important new test is being undertaken by Frontier Developments, Ltd., on the Two Hills structure east of Edmonton. The test has been spotted in LSD 2, Section 1-55-13w4. The location is about 2½ miles west of Two Hills station, which is on the C.P.R. line running through Lloydminster. It is 90 miles east of Edmonton, and 9 or 10 miles southwest of Alberta Pacific Consolidated's Duvernay No. 1 wildcat, drilled a few years ago.

Location was made by F. W. Rowher, chief geologist for Frontier Developments, Ltd. Mr. Rowher has been associated with the company's exploratory work in Alberta for the past five years. The decision to drill a commercial test on the Two Hills structure followed the drilling of a series of structure tests and a careful study of the structure, this preliminary work having been in progress for nearly a year. Contract has been let to Sheldon Burden Co. of Canada, Ltd., who are moving rotary equipment to the site; and the test is expected to spud in this month.

Frontier Developments, Ltd., is a Canadian subsidiary of the Canadian Exploration Co. of Denver, Colo. The latter company has extensive acreage on a number of Alberta structures, and the geological work of Mr. Rowher and his staff has been under the general supervision of Fisher & Lowrie, geologists, of Denver. Drilling operations on Canadian Exploration Co. acreage since 1927 have included Frontier Developments' No. 1 in the Wildcat Hills area, and the Duvernay and Spring Coulee tests drilled on Canadian Exploration Co. acreage by Alberta Pacific Consolidated Oils, Ltd.

The Two Hills location is some distance north of the extensive gas fields of east central Alberta. The Viking and Kinsella fields are south and a little west of the Two Hills structure. Still farther south, and a little east are the Irma, Fabyan, Wainwright and Ribstone areas with both gas and oil production. The new location is not far from the Talpey Syndicate's No. 1 Birch Lake test, drilled some 10 years ago, and is 25 miles from Vegreville, where gas showings have been encountered.

The nearest previous drilling was Alberta Pacific Consolidated Oils' No. 1, drilled some years ago on the Duvernay structure. Location of the Duvernay test was in LSD 5, Section 34-55-12w4, and the test was spotted after a series of structure tests in Townships 55 and 56 had indicated a promising structure. The log shows that the drilling started in the Belly River formation, with the top of the Lea Park-Colorado around 150 feet, the lower Cretaceous at 1,500 feet and the top of the Paleozoic lime at 2,070 feet. Four gas shows were encountered in the Colorado between 585 and 1,490 feet, while others were met in the Cretaceous at 1,504 and 1,530 feet. The first oil show was struck near the Colorado-Cretaceous contact at 1,490 feet and there were seven sands in the lower Cretaceous between 1,504 and 1,805 feet. Water was encountered around 1,500 and 1,683 feet and apparently a heavy water flow in th top of the Paleozoic. The test was ultimately abandoned at 2,417 feet, but the indications were regarded as so encouraging that further study and exploratory work was done, resulting in the decision to test the Two Hills structure.

From the log of the Duvernay well, it is anticipated that the new test will avoid the water troubles encountered in the previous drilling and secure a commercial production of black crude around 1,800 feet. This horizon, about 200 feet below the sand which produces gas in the Viking Field, corresponds with the main crude horizon of the Wainwright area.

Central Turner Valley

In the Central Turner Valley, McLeod Oil Co.'s No. 4 deep test, LSD 16, Section 1-20-3w5, is below 7,716 feet and resuming after repairs to the drill stem. The drillers have been experiencing some trouble with caving. The well has a flow of several million feet of wet gas, but no important indications of new production have been encountered. A potential deep producing horizon is looked for around 8,000 feet. Reports are again current that the drill has passed out of the lime into a recurrence of the Benton, but these are not confirmed by officials of the company, though a harder formation was met at 7,682 feet.

Turner Valley Conservation

Testing operations carried on by the Turner Valley Gas Conservation Board have reached their final stage, with the commencement of tests in the north central section. These tests will probably be completed next week, after which the board will be in a position to determine the permanent gas quotas for all the wells in the field. With the completion of the tests, the board will also take steps toward the working out of a voluntary pooling agreement covering the future operation of the field.

East of Turner Valley

East of the Turner Valley Field, Ranchmen's Gas & Oil Co.'s No. 1 on the High River-Aldersyde structure, LSD 16, Section 13-20-29w4, has resumed drilling after a long shutdown and is making new hole below 5,600 feet.

Keho Lake Test

On the Keho Lake structure, northwest of Lethbridge, Hudson's Bay Oil & Gas Co.'s No. 1 Keho, LSD 2, Section 17-11-22w4, is reported drilling out cement after setting 6-inch pipe in the Ellis at 4,878 feet. The sidetracking job which has held up progress for some months is practically complete, and the test will not be drilled to the Madison, which was encountered in the original hole at about 4,914 feet. Shows of oil and gas are reported to have been working up through the old hole, indicating heavy accumulated pressure. In the previous drilling a show of 32 gravity crude, with some gas, was met in the top of the Madison at about 4,920 feet, but owing to the loss of the tools at that time, a definite production test was not made. The oil is reported to have risen 2,500 feet in the hole after the strike. It is understood that a second well will be drilled in this area as soon as No. 1 is finished, the location being determined by the results secured in No. 1 supplemented by geophysical investigations.

Twin River Test

On the Twin River structure, southeast of Lethbridge, Nordon Corp.-C. A. Roney's No. 2 Twin River, LSD 11, Section 2-2-20w4, has derrick up and water and fuel lines installed. Hauling has been handicapped by soft roads, but considerable material is on location. Combination equipment will be used, drilling being in charge of Pat Adams, and the test is expected to spud in this month. The seismographic survey indicates that in this test the Madison lime is 200 feet higher than in No. 1, the latter well having got a small production of 31.5 gravity crude in the top of the Madison. Glen M. Ruby, president of Nordon Corp., which was interested in the drilling of No. 1, reports that the latter well is standing full of oil and flowing a few barrels a day. It is being tubed to increase the output of oil and gas and will supply fuel for No. 2.

Nordon Corp. has surveyed another structure south of Spring Coulee and has let a contract for the drilling of a test there, which will be started before the middle of December.

Athabaska Drilling

In the Athabaska district, northern Alberta, Athadome Oils' No. 2 on the Chris Tjensvold farm close to Athabaska Landing, will spud in this month. Athadome's No. 1, N half Section 20-72-24w4, was abandoned at about 1,900 feet. At this depth it was in the Devonian lime. A heavy gas flow was struck around 1,800 feet, followed by water, which led ultimately to abandonment. F. H. Stover & Son of Chatham, had the contract for the drilling of a total of three wells for the company in this area; and on the information secured in the drilling of No. 1, it was decided to drill No. 2 at a site much farther down the river, where more favorable conditions are anticipated.

Drilling in Ontario

In the Dawn Field, Lambton County, Ontario, Union Gas Co.'s No. 64, Lot 24, Concession 2, Dawn Township, has been drilled to 2,012 feet where it ran into water. It was plugged back and will be shot in the oil sand encountered at 1,930 feet. Union's No. 61, SW Lot 24, Concession 2, is cleaning out. Union's No. 63, NW Lot 23, Concession 2, is cleaning out and is reported flowing regularly though the full possibilities have not yet been determined.

In the Toronto area, Kiser Brothers of Chatham are drilling a test for Sir Donald Mann at Maple some 30 miles from Toronto. The drill is working in the granite below 1,800 feet. No commercial oil or gas was encountered in the upper horizons, but the test is being continued for radio-active mineral water which has been met in other deep wells drilled in the Toronto area.

NE NW Section 24-6n-61, the second well completed in the Greasewood Pool, dropped to less than 40 bbls. and went dead a week ago. Seven days later it cleaned itself and came back for 207 bbls. the first 24 hours, 64 bbls. the second period and then went dead again. It is shut down. Platte Valley Petroleum Co. is rigging up cable tools on its No. 1 William Wilson, C NE SE Section 24-6n-61, to deepen from 440 feet. It was drilled to this depth by the Reiter-Foster Oil Co. A six-month extension to proceed with the well expired November 1 and the Platte Valley company began operations to protect its leases.

Washington County

Akron Oil & Development Co.'s No. 1 Gilcrist, SW SE SW Section 22-3n-53, Fremont Butte district, northwest of Akron, has rig and tools on location and is erecting derrick. It will start in a 20-inch hole and will be drilled with cable tools. The objective is the Dakota at 4,000 feet and if nothing worth while is found, it is planned to go 2,000 feet deeper.

Adams County

Hills Dome Lease Development's No. 1 Hills, SE cor. Section 27-3s-64, Watkins district, is bottomed at 4,119 feet and cementing to stop caving.

Las Animas County

P. W. Harr's No. 1 Schneider, SE SW SE Section 10-23-63, Gray Creek, has reached contract depth at 2,010 feet and is shut down negotiating new contract. It is bottomed in the Carlisle shale.

La Plata County

J. W. Irwin & Co.'s No. 1 Doescher, SW cor. NW Section 29-33-13, Dry Mesa, drilled out plug after cementing the 6⅝-inch on top of the first Dakota at 3,160 feet. There was a show of oil in the top, but it was not commercial and hole is being carried down to the second sand.

Routt County

The Texas Company's No. 1 Irwin-Carstarphen, NE SE NW Section 5-6n-86, Tow Creek, cemented the 6¼-inch at 3,770 feet.

Moffat County

Mountain Fuel Supply Co.'s No. 1 Wilson, NE SW NE Section 22-12n-100, Hiawatha Dome, the discovery well which opened the Hiawatha gas field in 1927, is reported to have cleaned to bottom and cemented to stop caving preliminary to drilling deeper to discover what is below. The well has been making some oil and a separator has been installed and rigged ready to operate as soon as needed.

Rio Blanco County

The California Co.'s No. 1 California-Raven, NW SE Section 30-2n-102, Rangely Dome, is coring at 6,388 feet. Magnolia Petroleum Co.'s No. 1 Titley, NW cor. SW Section 15-2s-96, Piceance Creek, is drilling at 2,540 feet in brown shale and shells.

MONTANA

Glacier County

An important extension of the oil development in the Cut Bank area appears imminent in the Montana Power Co.'s No. 1 Simereo, C N half, Section 5-33n-5w, 3 miles south of the nearest gas well and 4 miles southeast of Tarrant's No. 1 Haglund, the nearest oil well. A United Press dispatch says that the well came in as a producer at the 2,850-foot level for an undisclosed quantity of paraffin base crude of 38.6 degrees gravity. Confirmation has not yet been received in Denver. The last report was that the well encountered a good show of oil in the top of the first sand at 2,750 feet and that it stopped to run the 6¼-inch pipe. It was planned to drill in today. Oil rose 1,000 feet in the hole.

Seven miles to the northwest, R. C. Tarrant's No. 1 Reickhoff, SE SW NE Section 3-34-6w, swabbed an average of 60 bbls. from sand at 2,921-62 feet and is running rods and tubing for a pumping test. This well is in the Blackfeet Indian Reservation and the farthest to the northwest of the operations now in progress. The distance between this well and the Montana Power Co.'s No. 1 Simereo is approximately 7 miles and the development in progress is in between these two extremes. The Cut Bank gas area, which supplies a large number of Montana towns with gas, is to the northeast of this operation.

Two other wells in this district are within striking distance of the sand and are due for completion within the next day or two. The Santa Rita Oil & Gas Co.'s No. 1 Yunck, NE cor. NW Section 23-34-6w, which is testing out the area half a mile to the southwest of Tarrant's No. 1 Haglund, is drilling at 2,720 feet, and Tarrant's No. 1 Yunck, NW cor. Section 12-34-6w, is drilling at 2,510 feet. The last named is a diagonal offset to the B. & H. Oil Co.'s No. 1 Haines, a small producer in spite of a bad hole.

The Texas Company's No. 1 Fisher, C S half SW Section 10-35-5w, in the proven gas area, is drilling at 2,200 feet and will be an early completion.

Routine operations in the Cut Bank district are as follows: The A. P. Consolidated Oil Co.'s No. 1 Matson, NE SE NW Section 14-34-6w, is rigging up, and the Hannah-Porter Co.'s No. 1 Britton, C SW SW Section 14-34-6w, is rigging. B. E. Adams' No. 1 Britton, SE cor. NE Section 14-34-6w, is drilling at 950 feet, and the Santa Rita Oil & Gas Co.'s No. 2 Yunck, NE cor. SE Section 24-34-6w, is drilling at 1,765 feet. R. C. Tarrant's No. 1 Longmiller, NE cor. Section 24-34-6w, has set surface pipe and is drilling ahead, and his No. 1 Britton, NE cor. SE Section 14-34-6w, is drilling below 545 feet. Tarrant's No. 1 McLellan, C SE Section 7-34-5w, is shut down at 415 feet for repairs, and his No. 1 Haglund, Sr., NW SW NW Section 13-34-6w, is drilling up joint of pipe at 1,850 feet.

Liberty County

People's Oil & Gas Co.'s No. 1 First National Bank, C SE NW Section 17-36-6e, Bear's Den, is drilling at 2,770 feet, below the Dakota series.

Carbon County

Ohio Oil Co.'s No. 7 William Robinson, C SE SE Section 3-7s-21, Dry Creek, is standing with the 6⅝-inch cemented at 5,597 feet after plugging back from the Lakota at a total depth of 5,753 feet. It promises to make an average producer in the Dakota. Same company's No. 11 Henry Bowman, C SE NE Section 4-7s-21, is standing with the 6⅝-inch cemented at 5,848 feet after plugging back to the Dakota from a total depth of 5,928 feet. Carbon Oil & Gas Co.'s No. 1 McMinn, NW SW SW Section 7-7s-22, is coring in the top of the Dakota at 5,463 feet.

Petroleum County

Minnesota-Flatwillow Oil Co.'s No. 1, SW SW Section 4-15-29, Cat Creek, is drilling below 500 feet. This is the first well drilled in Cat Creek for several years.

Broadwater County

Capitol Oil & Gas Co.'s No. 1, SE NW Section 7-8n-1e, Winston district, is reported abandoned at 2,002 feet. It has been unable to make any progress since tools were lost a year ago.

Gallatin County

Montana Gas & Petroleum Co.'s No. 1 Adams, SE cor. Section 35-2n-1e, Three Forks district, is drilling at 1,700 feet.

Toole County

Askalta Oil Co.'s No. 8 Farbo, NE NW NE Section 2-37-4w, the only active operation in the Border Field, is drilling at 2,090 feet.

SOUTH DAKOTA

Kennedy-Miller Oil & Gas Co.'s No. 2, NW NW Section 34-20-1e, Harding County, is reported to have encountered water in sand below a show of oil and to have abandoned the hole at 1,220 feet. A second test is drilling at 945 feet. This also is known as the D. J. Carter operation.

OREGON

Ray Kolbe and others are reported building rotary rig for a test in Section 7-23-30, 6 miles west of Burns. Water well has been completed.

WASHINGTON

Ohio Oil Co.'s No. 1-A Robinson, Section 5-17-9w, Gray's Harbor County, is drilling at 6,001 feet in basalt.

Kansas Fields

(Continued from Page 42)

offset wells or acreage must be notified by the producer taking the test and gauges must be witnessed by at least one representative from an offset lease of different ownership. Pumping or flowing production into tanks immediately at the well is prohibited. All oil run to a pipe line during the taking of the test must be gauged and pipe line run tickets acknowledged by a representative from an adjoining lease owned by some company other than the one running the oil. All wells not taking a test while other wells on the same lease are being tested must be shut down and sealed for the duration of the test. All gates and lines from wells shut down will be thoroughly checked and tested to make sure they are securely closed. Prior to commencement of this test every produced must furnish the umpire's representative with a map showing the location of all oil, gas, steam and water lines on each lease, together with all gates, checks and connections on lines. Allowable production on a basis of new tests will be figured from the time the potential starts. Violation of any of the above rules will automatically void the test and violators will be subject to prosecution.

Cowley County

McNabb's No. 1 Farsythe, SW cor. NE Section 11-32-4, is a location. Same operator's No. 1 Wilson, SE cor. NW Section 11-32-4, is a location. Roth & Farout's No. 2 Smiley, NE cor. SE NW Section 12-32-4, is a rig. Same company's No. 1 Graham, SW cor. NW Section 14-32-4, is a location. Same company's No. 5 Brandt, C NE SW NE, Section 12-32-4, was completed for 50 bbls. from 2,578-94 feet. Same company's No. 7 Moncrief, NW cor. NE NW SE Section 22-32-4, was completed for 300 bbls. from 3,273-75 feet. Fern Oil Co.'s No. 1 Gardenhire, NE cor. NW NW SW, Section 22-32-4, was abandoned at 3,335 feet. Sinclair Prairie Oil Co.'s No. 1 Dibbens, SE cor. NW NE, Section 22-32-4, made 450 bbls. from 3,240-53 feet.

Ellsworth County

Sinclair Prairie Oil Co.'s No. 1, C NE NE Section 27-15-8w, is a location. Phillips Petroleum Co.'s No. 1 Hochman, NE cor. NW SE Section 17-16-7w, was abandoned at 3,065 feet. Walker Oil Co.'s No. 1 Remley, SW cor. SE NE, Section 23-14-7w, was abandoned at 3,610 feet.

Greenwood County

Downing and others' No. 1 Reaser, NE cor. SE NE Section 7-24-12, is a location. Kates and Hubbard's No. 1 Vigle, SW cor. NE NE Section 28-24-12, is a machine. Lewis & Rosenthal's No. 1 Wright, SW cor. SE NW Section 36-24-12, is a location. Henderson & Holden's No. 4 Hess, NW cor. SE NW Section 34-22-11, was completed for 25 bbls. from 1,886-1,940 feet. Shull Drilling Co.'s No. 4 Johnson, C E half NW Section 16-22-12, was completed for 75 bbls. from 1,575-95 feet.

Harvey County

Hollow and others' No. 1 Schnidt, SW cor. SE NW Section 17-22-3w, is a rig. Phillips Petroleum Co.'s No. 2 Warkentine, NW cor. SW SW Section 20-22-3w, is a rig. Frost and others' No. 2 Martens, SE cor. NE SE Section 19-22-3w, is a rig. Same operators' No. 1 Martens, C NE SE SE Section 19-22-3w, was completed for 841 bbls. from 3,302-08 feet.

Kingman County

Panhandle Drilling Co.'s No. 1 Wetherall, C SE NW SW Section 20-28-10w, was abandoned at 1,610 feet. Skelly Oil Co.'s No. 2 Leisman, SW cor. Section 20-27-10w, was completed for 65 bbls. from 3,386-3,492 feet.

Marion County

Youker and others' No. 1 Melcher, C SW SE Section 20-18-4, was abandoned at 2,670 feet as a dry hole.

Ness County

Sinclair Prairie Oil Co.'s No. 1 Wilhelm, C SW SW Section 16-19-21w, is a rig.

McPherson County

Mabie and others' No. 1 Klassen, NW cor. SE Section 33-21-3w, is a location. Palmer and Phillips Petroleum Co.'s No. 3 Winn, SE cor. NW Section 7-20-1w, an old well, was drilling deeper at 3,434 feet. Spencer and others' No. 1 Neufeldt, NW cor. SE SE Section 16-21-3w, was completed for 190 bbls. from 3,096-3,100 feet. All States Oil Co.'s No. 2 Wall, SE cor. SW Section 21-21-3w, was completed for 87 bbls. from 3,111-16 feet. Vernon Oil & Gas Co.'s No. 1 Lewis, SE cor. SW Section 26-19-2w, an old well drilling deeper, was completed for 135 bbls. from 3,367-87 feet.

Sedgwick County

Fisher & Lauck's No. 10 Trustee, SW cor. NE SE Section 19-27-2, was completed for 165 bbls. from 2,945-55 feet. Gypsy Oil Co.'s No. 2 Hamant, NW cor. SW Section 14-26-2, an old well drilling deeper, was completed for 96 bbls. from 3,359-64 feet. Graham Brothers' No. 1 Rapp, NE cor. Section 21-26-2, was abandoned at 3,243 feet. Continental Oil Co.'s No. 2 Smith, CWL SE NE SE Section 16-25-1, was completed for 45 bbls. from 3,359-67 feet.

Woodson County

Absher and others' No. 1 Bahr, NE cor. Section 26-23-13, was completed for 16 bbls. from 1,796-1,811 feet. Theta Oil Co.'s No. 4 Shaffer, NW cor. SW SE Section 31-23-14, was completed for 20 bbls. from 1,646-81 feet.

Wildcat Operations in Oklahoma

(Continued from Page 44)

OKLAHOMA COUNTY

Carter Oil et al's No. 1 Shawbell, C SW NE Sec. 1-12-4w.. Drlg. 4,530 ft.
Citizens Oil Co.'s No. 1 Sage Barber, NE cor. Sec. 21-11-3w ..... S.D. 1,200 ft.
L. C. Hivick's No. 1 Sunset Addition, NW SW NW Sec. 17-11-3w ..... S.D. 5,515 ft.

PAWNEE COUNTY

Rookstool's No. 1 Wylie, NW NE SW Sec. 6-20-5 ..... S.D. 1,950 ft.

PITTSBURG COUNTY

Moffett & Hall's No. 1 Jones, NW cor. Sec. 14-8-14 ..... S.D. 1,675 ft.

PONTOTOC COUNTY

Delaney's No. 1 Harden, NE SW Sec. 30-2-7 ..... Machine.
Blackwell Oil & Gas Co.'s No. 1 Abbott, NW SW NE Sec. 14-4-6 ..... 1,030 ft.; 4,000,000 ft. gas, to bradenhead.
Williams' No. 1 Krath, NE SE Sec. 33-3-4 ..... Drlg. 1,542 ft.
Edna Marie's No. 1 McWhirt, NE SE Sec. 11-2-6 ..... S.D. 570 ft.
Sunray Oil's No. 1 Grant, SE NE Sec. 11-4-8 ..... Drlg. 2,796 ft.

POTTAWATOMIE COUNTY

Brown et al's No. 1 Sauter, NW cor. Sec. 35-11-4 ..... Digging cellar.

ROGER MILLS COUNTY

Ute Oil Co.'s No. 1 Williams, C SW Sec. 23-12-24w ..... S.D. 5,150 ft.
L. C. Hivick's No. 1 Davis, C NW NE Sec. 4-11-26w ..... S.D. 3,420 ft.

SEMINOLE COUNTY

Donnelly et al's No. 1 Shepard, SE NE Sec. 4-8-8 ..... S.D. 1,270 ft.

WASHITA COUNTY

Miley Pet. Co.'s No. 1 Montgomery, SW NW SE NW Sec. 23-9-17w ..... S.D. 1,004 ft.
Miley Pet. Co.'s No. 1 Wolfe, NE SW Sec. 23-9-17w ..... Rig.
Cooper & Terhune's No. 1 Blocker, NW cor. Sec. 29-8-19w ..... Show oil 2,459-67 ft.; S.D. 2,757 ft.
Burns & Prince's No. 1 Deck, SW cor. Sec. 21-8-18 ..... S.D. 2,160 ft.

Oklahoma Panhandle

TEXAS COUNTY

Three Way Oil Co.'s No. 1 Crane, SW NW Sec. 11-1-1S ... T.D. 4,720 ft.; to cement.

Southern Oklahoma

ATOKA COUNTY

Malarnee et al's No. 2 D.O.K. Land, C SE SE Sec. 35-2-12 ... S.D. 25 ft.

Malarnee et al's No. 1 D.O.K. Land Co., C E half SE Sec. 35-2s-13 ... S.D. 680-704 ft.; est. 3 bbls.

Morris et al's No. 1 Ray, NE NW NE Sec. 8-2s-12 ... Abnd. 610 ft.

Brookshire's No. 1 R. W. Rowland, NW NE SE Sec. 18-3s-10 ... S.D. 3,265 ft.

JEFFERSON COUNTY

Bridwell's No. 1 Wolghomuth, NW NE SE NW Sec. 30-6s-5W ... 1,483-85 ft.; est. 30 bbls.

E. S. Bonner's No. 1 Burgess, NE SE Sec. 12-5s-8W ... S.D. 750 ft.

MARSHALL COUNTY

Lee Cross' No. 1 Hamlin, SE SW SW Sec. 26-6S-5 ... Drlg 100 ft.

Thomas' No. 1 Setliff, SW SE SE SW Sec. 36-5s-6 ... S.D. 20 ft.

McCURTAIN COUNTY

Stampfs' No. 1 Robert Harris, SW NW SW Sec. 14-9s-25 ... S.D. 2,778 ft.

PUSHMATAHA COUNTY

Whitehead et al's No. 1 Messer, SE SW SW Sec. 35-2s-18 ... S.D. 1,950 ft.

STEPHENS COUNTY

Calif. Prod. & Oper. Co.'s No. 1 Florence, NE NW SE Sec. 11-3s-6W ... S.D. 330 ft.

Calif. Prod. & Oper. Co.'s No. 1 Garnett, SE NE NE Sec. 11-3s-6W ... S.D. 325 ft.

Calif. Prod. & Oper. Co.'s No. 1 Suton, NE SE SW Sec. 12-3s-6W ... Rig.

Gillette Bros.' No. 1 Cooley, NW SE NW Sec. 17-2s-8W ... S.D. 25 ft.

George's No. 1 Ryan, NW SW NE Sec. 31-3s-15 ... S.D. 510 ft.

Wildcat Operations in Louisiana-Arkansas

(Continued from Page 41)

G. C. Smith et al's No. 1 Wollums, 330 ft. N and W, SE cor. Sec. 30-12-12 ... S.D. 1,360 ft.

E. J. Stanberry's No. 1 Naborton O. & G. Co., Sec. 32-13-11 ... S.D. 800 ft.

State Drlg. & Prod. Co.'s No. 1 Wemple, 330 ft. N and E, SW cor. NW SW, Sec. 14-12-11 ... Derrick.

Walters-Nicholson, tr.'s No. 1 Jim Guy, Sec. 3-11-13 ... W.O.S.R. 2,767 ft.

Warren & Craig's No. 1 J. A. Wagner, 150 ft. S and W, from C, Sec. 5-12-14 ... Set 10-in. 100 ft.

Jack Whitson's No. 1 Sanders, 330 ft. N and E, SW cor., Sec. 19-11-13 ... Testing 1,465 ft.

GRANT PARISH

A. W. Phillips, tr.'s No. 1 Cameron, 300 ft. N, 200 ft. E, SW cor. SW NW, Sec. 26-7-3W ... Location.

O. Robichaux's No. 1 T. M. Bradford, 1,870 ft. E, 314 ft. S, NW cor., Sec. 16-9n-1e ... Derrick.

LINCOLN PARISH

Loring Oil Co.'s No. 1 Simonton, 300 ft. N, 480 ft. E, SW cor. SE NE, Sec. 25-20-4w ... Drlg. 2,000 ft.

MOREHOUSE PARISH

Feasel & Kalil's No. 1 Davenport, Sec. 28-21-6e ... S.D. 2,510 ft.

H. W. Snowden's No. 1 Meyers, 330 ft. S and E, SW cor. NE NE, Sec. 15-22-7e ... S.D. 30 ft.

NATCHITOCHES PARISH

Allender & Rasmussen's No. 1 Cane River, 330 ft. N and W, SE cor., Sec. 61-6n-5w ... S.D. 30 ft.

W. M. Coates' No. 1 Ross Olive, Sec. 10-9-10, 660 ft. S and E from cen. of Sec. ... S.D. 2,010 ft.

Dr. H. S. Gerson's No. 1 Smith, Sec. 11-10-8, 2,000 ft. N, NE cor. of irregular Sec. 10, in Sec. 11 ... T.A. 1,875 ft.

Dr. H. S. Gerson's No. 3 Smith, approximately 1,000 ft. N of NE cor. of irregular Section 10, Sec. 11-10n-8w. Set 6-in. 450 ft.

J. B. Oil Co.'s No. 1 Hankins et al, Sec. 67-10-7 ... Drlg. 515 ft.

R. A. Keaton's No. 1 Bastrop State Bank, 200 ft. N and W, SE cor. NE NW, Sec. 17-10-6 ... Location.

R. A. Keaton's No. 1 Stephens, Sec. 25-10-6, 320 ft. N and W, SE cor. NW NW ... S.D. 1,700 ft.

Natchitoches Pet. Co.'s No. 1 Edenburn, 2,240 ft. W, 1,320 ft. S, NE cor., Sec. 4-11-6w ... S.D. 2,234 ft.

H. W. Perritt's No. 1 Cook, 165 ft. E, 105 ft. N, SW cor. NE SW, Sec. 8-8-9 ... S.D. 2,993 ft.

Sabine Bayou Dev. Co.'s No. 1,130 Caw, 330 ft. N and E, SW cor. SE, Sec. 9-12-5 ... Drlg. 2,586 ft.

Texana Oil Co.'s No. 1 Clark-Morris Lbr. Co., 878 ft. N, 660 ft. E, C, Sec. 33-5-6 ... Set 6⅝-in. 3,300 ft; T.D. 3,475 ft.

OUACHITA PARISH

Monroe Oil & Royalties Co.'s No. 1 Thieler, 150 ft. N and E, SW cor. SE NW, Sec. 24-18-2e ... Drlg. 2,480 ft.

Wilson & Mitchell's No. 1 Williams, Sec. 5-16-1e, 330 ft. E, 240 ft. S, NW cor. SW SE ... S.D. 3,480 ft.

RED RIVER PARISH

Edward & Clay's No. 1 Delta Pecan Co., 1,600 ft. N, 450 ft. E, SW cor., Sec. 27-13-11 ... Drlg. 924 ft.

Lawrence Decker, tr.'s No. 1 Madden, 1,650 ft. S and W. NE cor., Sec. 21-14-10 ... S.D. 2,800 ft.

G. T. Shaw et al's No. 1 Wilkinson, 300 ft. N, 460 ft. W, SE cor. NE SE, Sec. 4-12-10 ... Location.

SABINE PARISH

Adams & Roberson's No. 1 Peterson, 405 ft. N, 200 ft. W, SE cor. NE NE, Sec. 35-8-13 ... S.D. 100 ft.

R. E. Brooke's No. 1 A. Gray, 330 ft. N and W, SE cor. SW NE, Sec. 35-8-13 ... Location.

John R. Bunn's No. 1 Sabine Lbr. Co., 295 ft. S, 386 ft. W, NE cor. SW NE, Sec. 9-7-13 ... T.A. 2,422 ft.

Byars et al's No. 1 Bishop, SW cor. SW NE, Sec. 16-7-13 ... S.D. 41 ft.

Cloud & Bolin's No. 1 Bowman-Hicks, SE cor. NE NE, Sec. 26-9-13 ... Set 8⅝-in. 1,705 ft; T.D. 1,707 ft.

Coates Pet. Co.'s No. 2 Stille, 330 ft. N and E, SW cor. SE SW, Sec. 35-8-11 ... W.O.S.R. 2,465 ft.

Coates Pet. Co.'s No. 3 Stille, 330 ft. N and E, SW cor., Sec. 35-8-13 ... Location.

Mark Curtis et al's No. 1 Sabine Lbr. Co., 330 ft. N and W, SE cor. NE SE, Sec. 35-8-13 ... S.D. 2,400 ft.

B. Q. Daniels' No. 1 Armstrong, SE cor. SE NE, Sec. 31-8-10 ... Derrick.

Mrs. Dabney's No. 1 Hill, 265 ft. N, 235 ft. W, SE cor. NE NE, Sec. 5-7-11 ... Location.

Mrs. Dabney's No. 2 Hill, 230 ft. S, 235 ft. W, NE cor., Sec. 5-7-11 ... Location.

Flinchbaugh & Myers' No. 1 Aaron, 250 ft. S and E, NW cor., Sec. 32-9-13 ... Rigged up on second hole.

R. L. Gay, tr.'s No. 12 Bowman-Hicks, 330 ft. S, 390 ft. W, NE cor. SW SW, Sec. 14-7-14 ... Cmtd. bottom of hole 2,791 ft.

R. L. Gay, tr.'s No. 1-A Long Bell Lbr. Co., 430 ft. S, 360 ft. W, NE cor. NW NW, Sec. 16-8-13 ... Coring 6,610 ft.

Gibson & Johnson, Inc.'s No. 2 Frost Lbr., 330 ft. S and W, NE cor. NW NE, Sec. 15-9-13 ... Set 6⅝-in. 1,484 ft; T.D. 1,516 ft.

W. N. Hankins' No. 1 Tilley, 200 ft. E, 30 ft. S, NW cor. SE SE, Sec. 30-8-12 ... Swedging out 6-in. csg. 2,162 ft.

Hollis et al's No. 1 Sabine State Bank, 350 ft. N and W, SE cor. SW SW, Sec. 28-8-11 ... S.D. 1,025 ft.

Lb Jones' No. 1 Garcia, 200 ft. S and W, NE cor. NW SE, Sec. 4-7-12 ... Set 6-in. 2,070 ft.

G. R. Jordan's No. 1 Dew, 330 ft. N, 340 ft. E, SW cor. SW SE, Sec. 34-8-11 ... S.D. for wtr. 950 ft.

E. P. Kilgore's No. 1 Thomas, 320 ft. S, 200 ft. E, NW cor. SE, Sec. 36-8-11 ... Cmop. flowing 1,000 bbls. 2,341 ft.

Lana, Bundy & Allen's No. 1 Andree, Sec. 22-7-11 ... Derrick.

Geo. LeGrand's No. 1 McGough, Sec. 3-8-10 ... Tested dry 2,200 ft; T.D. 2,210 ft.

C. D. Loe, tr.'s No. 1 Whiting, 330 ft. N and W, SE cor. NW NE, Sec. 12-9-14 ... Rigging up.

E. C. Maulding's No. 1 Moores, 330 ft. S and W, NE cor. SE NE Sec. 16-7-13 ... S.D. 2,270 ft.

Ben Merritt's No. 1 Lucins, 400 ft. N, 378 ft. E, SW cor. SW NE, Sec. 4-5-12 ... Derrick.

Paul L. Miller, tr.'s No. 1 Chadick, 550 ft. S, 178 ft. E, NW cor. NE SW, Sec. 32-8-10 ... Comp. pumping 40 bls. 2,589 ft.

E. F. Neely's No. 1 Rains, 660 ft. N, 100 ft. W, SE cor., SW NW, Sec. 14-7-11 ... Comp. pumping 40 bbls. 2,540 ft.

W. M. Neely's No. 1 Buvens, 350 ft. S, 100 ft. E, NW cor. NE, Sec. 21-7-11 ... Waiting on csg. 2,458 ft.

C. D. Neff, tr.'s No. 1 Snell, Sec. 9-7-11, 350 ft. N, 660 ft. W, SE cor. Sec. ... W.O.S.R. 2,809 ft.

H. W. Perritt's No. 2 Brown Lbr. Co., 519 ft. S, 455 ft. W, NE cor. NW NE, Sec. 31-8-10 ... S.D. 400 ft.

Roy Raines et al's No. 1 Beard, 720 ft. E, 700 ft. N, SW cor. SW SE, Sec. 8-8-10 ... Set 10-in. 41 ft: drlg. 200 ft.

Reeves & McNeely's No. 1 Ponder, 330 ft. N and W from C, Sec. 15-7-11 ... Rigging up.

Thornton et al's No. 1 S. S. Martines, 355 ft. S, 330 ft. W, NE cor. SE NE, Sec. 4-7-13 ... S.D. 2,048 ft.

Otis A. Roberts' No. 1 Sabine Lbr. Co., 324 ft. S, 481 ft. W, NE cor. SW NE, Sec. 5-7-13 ... S.D; W.O. 2,500 ft.

Roberts & Sledge's No. 1 La. Long Leaf Lbr. Co., 290 ft. N, 468 ft. E, SW cor. NE SE, Sec. 29-8-10 ... Derrick pattern.

Roberts & Sledge's No. 2 Sabine Lbr. Co., 803 ft. W, 796 ft. N, SE cor. SE SW, Sec. 5-7-13 ... W.O.S.R. 2,480 ft.

Roshko & Labarre's No. 1 Maines, 427 ft. E, 114 ft. N, SW cor. SE NE, Sec. 35-8-11 ... Rigging up.

Sabine Prod. Co.'s No. 1 Whiting Corp., 150 ft. N and E, SW cor. Sec. 4-9-13 ... Rigging up.

Silvey & O'Mara's No. 1 Sabine Lbr. Co., 300 ft. S, 600 ft. W, NE cor. SW NE, Sec. 9-7-13 ... Set 8-in. 42 ft; drlg. 1,462 ft.

Skidmore & Mize's No. 1 Stoker, 440 ft. N, 225 ft. E, SW cor. SE NW, Sec. 33-8-10 ... S.D. for wtr. 920 ft.

C. W. Smith et al's No. 1 Pattison, 330 ft. S and E, NW cor. SE NW, Sec. 33-10-11 ... Derrick.

Southland Drlg. Co.'s No. 1 Frost Lbr. Co., 330 ft. N and W, SE cor. NE NE, Sec. 13-9-11 ... S.D. 1,920 ft.

H. B. Stacey et al's No. 1 Hefkobita, 457 ft. N, 583 ft. E, SW cor. SE, Sec. 34-8-13 ... S.D. 2,568 ft.

Thornton et al's No. 2 S. S. Martines, 312 ft. E, 205 ft. S, NW cor. SE NE, Sec. 4-7-13 ... Location.

Triangle Drlg. Co.'s No. 1 La.-Long Leaf Lbr. Co., 330 ft. N and W, SE cor. Sec. 11-6-11 ... S.D. 4,013 ft.

W. M. Ungerman's No. 1 P. Cross, 53 ft. S, 146 ft. W, NE cor. SW SE, Sec. 25-8-11 ... Rigging up.

TENSAS PARISH

H. V. Schumacker's No. 1 Currey, 1,320 ft. S, 1,320 ft. E, NW cor., Sec. 39-11-12 ... S.D. 3,645 ft.

UNION PARISH

E. S. Goens et al's No. 1 Frost Lbr. Co., 330 ft. S and E, NW cor., Sec. 17-22-2e ... Derrick.

W. D. Wingfield et al's No. 1 Union Sawmill Co., 330 ft. N and E, SW cor., Sec. 27-23-1e ... Derrick pattern.

Wong Hing, tr.'s No. 1 Union Sawmill Co., 712 ft. W, 246 ft. N, SE cor., Sec. 15-22-1e ... S.D. 70 ft.

VERNON PARISH

Earl Jones' No. 1 Willis, 350 ft. N, 400 ft. E, SW cor. SE SE, Sec. 32-3n-9w ... Derrick.

Llano Co-operative Colony's No. 1 fee, NW NE, Sec. 34-2n-9w ... Drlg. 2,900 ft.

WEBSTER PARISH

George Pearce et al's No. 1 Ambrose, 200 ft. N and W, SE cor. SW SE, Sec. 22-20-10 ... Coring 3,032 ft.

R. E. Silvey et al's No. 1 Drake est., C NE NE, Sec. 14-19-10 ... Derrick.

WEST CARROLL PARISH

Mamie S. McCurry's No. 1 Richard & Donnaw, 300 ft. N and E, SW cor., Sec. 13-19-9e ... Moving in rig.

WINN PARISH

P.V.T. Oil Co.'s No. 1 Southern Paper Co., 150 ft. S and W, NE cor. SW, Sec. 28-13-3 ... S.D. for 8-in. csg. 1,050 ft.

Arkansas

CLAY COUNTY

S. C. Jeffus' No. 1 Underwood, 510 ft. N, 350 ft. W, C, NW SE, Sec. 4-20-3 ... S.D. 1,253 ft.

CLEBURNE COUNTY

Frank S. Craver et al's No. 2 Doniphan Lbr. Co., 700 ft. N, 200 ft. E, SW cor. SW, Sec. 34-11-9 ... S.D. 1,790 ft.

COLUMBIA COUNTY

Kendall Oil Co.'s No. 1 Fullenweider, 300 ft. S and E, NW cor. NE NE, Sec. 13-17-22 ... S.D. 2,441 ft.

DREW COUNTY

Co-Operative Dev. Co.'s No. 1 Ogles, Sec. 35-15-5, 330 ft. S and E, NW cor. NE NW ... S.D. 3,378 ft.

LAFAYETTE COUNTY

Fox & Langford's No. 1 Coleman Bros., 330 ft. S and E, NW cor. SE SE, Sec. 25-16-25 ... Drlg. 1,140 ft.

Chas. McDonald's No. 1 Allen, 400 ft. N and W, SE cor. SE SW, Sec. 2-19-26 ... Set 10-in. 102 ft; drlg. 1,292 ft.

Sam E. Wilson, Jr., No. 1 Smith, 330 ft. N and E, SW cor. NW SE, Sec. 24-19-25 ... Derrick.

LINCOLN COUNTY

Lawrence Cook, tr.'s No. 1 McGhee Planting Co., 420 ft. S, 200 ft. W, NE cor. NE SW, Sec. 5-8-7 ... Arranging to set 1,000 ft. of 8-in.; T.D. 3,250 ft.

LITTLE RIVER COUNTY

American Portland Cement Co.'s No. 1 fee, 150 ft. S and E, NW cor. SW NE, Sec. 21-13-32 ... Drlg. 50 ft.

M. E. Sanderson's No. 1 Hale, 1,200 ft. E, 300 ft. N, SW cor. SE SE, Sec. 22-12-29 ... Drlg. 850 ft.

MILLER COUNTY

Dennis & Cubage's No. 1 Head, 150 ft. E, 200 ft. N, SW cor., Sec. 20-15-26 ... Set 10-in. 140 ft; drlg. 1,780 ft.

Duluth-Ark. Oil Co.'s No. 1 Beck, 150 ft. N, 170 ft. E, SW cor. NW SW, Sec. 34-15-26 ... Rigging up.

Fitzwater et al's No. 1 C. J. Norsen, SW cor. SE SW, Sec. 20-15-27 ... S.D. 1,960 ft.

Fitzwater et al's No. 2 Beck, 150 ft. N and E, SW cor. SW SE, Sec. 33-15-26 ... Moving in rig.

Fitzwater et al's No. 1 Fouke, 150 ft. S and W, NE cor., Sec. 11-17-27 ... S.D. 105 ft.

Wm. S. King's No. 1 Beck, 330 ft. S and E, NW cor. NE NW, Sec. 35-15-26 ... Coring 3,142 ft.

Chas. B. Lenz's No. 1 Dean, 125 ft. E, 200 ft. S, NW cor. SE Sec. 19-15s-25w ... Drlg. 1,560 ft.

W. E. Noel et al's No. 1 Dickson hrs., 1,980 ft. W, 440 ft. S. NE cor., Sec. 11-20-27 ... S.D; W.O. 2,600 ft.

John C. Rogers' No. 1 Price, 230 ft. S, 400 ft. E, NW cor. NW NW, Sec. 17-16-25 ... Rigging up.

Bob Simmons' No. 1 Lamb, NE NW NW, Sec. 14-16-27 .Derrick pattern.

Sorrells & Tidwell's No. 1 Roy McCowan, 660 ft. S and E, NW cor. NW SE, Sec. 22-15-28 ... Set 10-in. 106 ft.

OUACHITA COUNTY

McLeon et al's No. 1 L. D. Neely, Sec. 23-15-16, 200 ft. N and W, SE cor. NE SW ... S.D. 150 ft.

Chas. Steele et al's No. 1 Anderson, 155 ft. S, 150 ft. E, from center Section 36-12-18 ... T.D. 1,015 ft.

PIKE COUNTY

H. R. Henderson's No. 1 J. L. Lee, 400 ft. S, 350 ft. E, NW cor. SW SE, Sec. 21-8-24 ... S.D.; W.O. 1,030 ft.

R. R. Henderson's No. 1 W. B. East, 200 ft. S, 150 ft. W, NE cor., Sec. 13-9-23 ..... S.D.; rig.

PRAIRIE COUNTY

Powell Creek O. & G. Co.'s No. 1 Kloss, NE SW, Sec. 3-4n-4w ..... Partly rigged up and S.I

ST. FRANCIS COUNTY

R. R. Henderson's No. 1 Britton, Sec. 1-4-1e, 1,000 ft. S and E NW cor. NE NW ..... Drlg. shale and gumbo 3,710 ft.

UNION COUNTY

S. H. Adams' No. 1 Murphy, NE cor. NW NE, Sec. 31-16-14 ..... Location.

Cox et al's No. 1 Goodwin, 360 ft. S, 180 ft. W, NE cor. SW SW, Sec. 3-16-16 ..... S.D. 140 ft.

R. H. Helms' No. 1 C. H. Murphy, NE cor. NW NE, Sec. 31-16-14 ..... Rigged up and S.D.

Wilson & Chapman's No. 1 King, Sec. 3-18-13, 330 ft. N and E, SW cor. NE NE ..... Derrick.

Wilson & Chapman's No. 1-A D. Norman, 330 ft. S and E, NW cor. N½ NE SE, Sec. 3-18-13 ..... S.D. 1,678 ft.

WASHINGTON COUNTY

(Cable tools)

A. B. Chase and Ed Rogers' No. 1 Cunningham, 125 ft. S, 300 ft. W, NE cor. SW NE, Sec. 14-15-32 ..... S.D. 1,750 ft.

WOODRUFF COUNTY

B. F. Thompson's No. 1 Rosser, 500 ft. N and E, SW cor. SE SE Sec. 7-5n-2w ..... Set 400 ft. 10-in. surface csg.

East Texas

BOWIE COUNTY

Logan & Elliott's No. 1 Smith, 9,600 ft. S, 2,500 ft. W, NE cor. Chas. Lewis Sur. ..... S.D. 4,505 ft.

Lanford et al's No. 1 W. W. Whybark, 200 ft. S, 200 ft. W, SW cor. J. H. Dyer Sur. ..... S.D. 1,792 ft.

CASS COUNTY

Davis & Pigg's No. 1 Roy Bryan, SW cor. Roy Bryan 88-ac. tr., Albert H. Lattimer Sur. ..... S.D. 2,860 ft.

G. E. Murdock's No. 1 First National Bank, Evans Watson Sur. ..... S.D. 4,390 ft.

John C. Rogers' No. 1 I. E. Lanier, 575 ft. N, 879 ft. W, SE cor. Lanier 86 ac. in K. E. Welborn Sur. .... S.D. 2,280 ft.

John C. Rogers et al's No. 1 W. Q. Henderson, 2,100 ft. S, 3,100 ft. E, NW cor., Wm. Davis Sur. ..... S.D. 960 ft

HARRISON COUNTY

Great Eastern Oil Co.'s No. 1 Rudd, Wm. Steele Sur. .... Drlg. 950 ft.

Pat Hudson et al's No. 1 Heitt, B.B.B.&C.R.R. Sur. .... Location.

M. E. Nash et al's No. 1 Henderson, G. L. Bledsoe Sur. .. S.D. 3,485 ft.

Ryan Cons. Pet. Corp.'s No. 1 J. M. Fuhr, 1,300 ft. N of NW cor. T. J. Copelin Sur., 1,675 ft. SW at right angles to NW SE line of O'Neal Sur. ..... Coring 5,131 ft.

Triangle Drlg. Co.'s No. 1 Platt, 1,125 ft. W, 1,995 ft. N, SE cor. F. C. Barker Sur. ..... Location.

MARION COUNTY

Bannoch Dev. Co.'s No. 1 Miller, 725 ft. N, 1,470 ft. E, SW cor. H. Fulgram Sur. (was Gist, Claunch & Dodson) ..... Reaming to bottom 4,480 ft.

Geo. Hindeman et al's No. 1 F. V. Lindsey, 2,500 ft. S, most northerly N line, 3,555 ft. E most easterly W line, Alexander Albright Sur. ..... S.D. 2,380 ft.

Purcell et al's No. 1 Coker, M. Reed Sur. ..... S.D. 1,957 ft.

Starling & Preston's No. 1 Henderson, R. Bennington Sur. H. R. S. ..... Drlg. 1,440 ft.

PANOLA COUNTY

Root-Skinner's No. 1 Daniel, 600 ft. N and W lines, Mrs. Gerrell 100-ac. tr., SW cor. Isabel Hanks Sur. .. S.D. for D.S. 740 ft.

J. L. Nelson et al's No. 1 J. Williams, 300 ft. S, 700 ft. W, NE cor. Williams' 67-ac. tr. in James Hanks Sur. ..... S.D. 3,055 ft.

SHELBY COUNTY

E. H. Francis' No. 1 John Mims, Mary Smith Sur. .. .. Tested dry 2,842 ft; S.D. W.O.

General Minerals Co.'s No. 2 Pickering Lbr. Co., 600 ft. N, 400 ft. E, SW cor. D. S. Height Sur. ..... Set 8¼-in. 3,275 ft.

Oil News' No. 1 Pickering, C. H. Patterson Sur. ..... Reaming 3,360 ft.

Henry Mauiding's No. 1 Frost Lbr. Co., NE cor. Frost Lbr. Co.'s 20-ac. tr., A. D. Fountain Sur. ..... Drilled to 50 ft; S.D.

Prairie Creek Crude Co.'s No. 1 Ellington, 150 ft. N and 300 ft. W from SE cor. 42-a. tr. of J. Burleson Sur. .. S.D. 3,380 ft. for csg.

Eidgeway et al's No. 1 Polley, Domingues Gonzales Sur., 2,130 ft. E of SW cor., 140 ft. N at right angles of Polley 457-ac. tr. ..... S.D. 2,820 ft.

Sodberry et al's No. 1 Pickering Lbr. Co., 600 ft. N, 400 ft. E, SW cor. Jane Stoddard Sur. ..... S.D. 2,375 ft.

Western World's No. 1 Foster, Billingsby-Jeremiah Bowlin Sur. ..... S.D. 2,940 ft.

Wray & Dunbar's No. 1 C. A. Hayden, 400 ft. N and W SE cor. 152-ac. tr. in D. T. F. Yordt Sur. ..... S.D. for wtr. 2,280 ft.

Louisiana-Arkansas Proven Areas

North Louisiana

BOSSIER—BELLEVUE AREA

Company, well, farm name, section and block— Remarks

H. I. Morgan's No. 2 Smith, 1,520 ft. N, 660 ft. W, SE cor., Sec. 22-19-11 ..... Coring 1,718 ft.

CADDO—PINE ISLAND AREA

Shreveport Oil Corp.'s No. 1 Muslow, 900 ft. N, 100 ft. E, from C. Sec. 32-21-15 ..... Set 6-in. 2,125 ft.

CADDO—RODESSA AREA

Ark.-La. P. L. Co.'s No. 1 F. E. Gloyd, 660 ft. E, 100 ft. S, NW cor. NW NE, Sec. 34-23-16 ..... Set 9⅝-in. 3,388 ft; coring 4,255 ft.

CADDO—BETHANY AREA

Calatex O. & G. Co.'s No. 1 Mrs. E. Augura, 2,567 ft. N, 2,600 ft. E, SW cor., Sec. 19-16-16 ..... Derrick.

Calatex O. & G. Co.'s No. 1 J. M. Agure, 2,000 ft. N, 800 ft. E, SW cor., Sec. 9-16-16 ..... Comp. 7,000,000 ft. gas 3,004 ft.

CADDO—BLANCHARD AREA

Nick Barbare's No. 1 Puckett, 330 ft. S, 150 ft. W, NE cor., Sec. 6-18-16 ..... Rigging up.

Louana O. & G. Co.'s No. 1-A Hammeck, 760 ft. S and W, NE cor., Sec. 5-18-16 ..... Drlg. 2,447 ft.

Louana O. & G. Co.'s No. 1 Carrie et al, 1,320 ft. W, 660 ft. S, NE cor. SE, Sec. 32-19-16 ..... Derrick.

Louana O. & G. Co.'s No. 1 Waskom, 660 ft. N and E, SW cor., Sec. 29-19-16 ..... Set 10-in. 50 ft.

MOREHOUSE PARISH

United Gas Public Service Co.'s No. 9 Sandidge, 200 ft. S of C, Sec. 27-20-4e ..... Set 12½-in. 167 ft; set 8-in. 858 ft.

RICHLAND PARISH

Pelican Nat. Gas Co.'s No. 2 Noe, 1,320 ft. N, 660 ft. W, SE cor. SW, Sec. 11-17-5e ..... Set 8-in. 857 ft; drlg. 910 ft.

SABINE PARISH—ZWOLLE

Abbott & Rankin's No. 1 Nulten, 330 ft. S and E, NW cor. SE NE, Sec. 2-7-13 ..... W.O.S.R. 2,397 ft.

Jule Alford's No. 1 Stoker, 312 ft. N and W, SE cor. NE SW, Sec. 10-7-11 ..... Repairing derrick 2,620 ft.

J. H. Askew's No. 2 Henderson, 400 ft. S, 150 ft. E, NW cor. SW SE, Sec. 31-8-10 ..... Derrick.

J. H. Askew's No. 2 Henderson, 420 ft. S, 190 ft. W, NE cor. SW SE, Sec. 31-8-10 ..... S.D. 2,657 ft.

J. H. Askew's No. 2-E McNeely 65 ft. S, 100 ft. W, NE cor. SE NE, Sec. 14-7-11 ..... W.O.S.R. 2,658 ft.

Askew & Ellis' No. 3-E McNeely, 330 ft. N and W, SE cor. NE, Sec. 14-7-11 ..... W.O.S.R. 2,567 ft.

Baird Bros.' No. 3 Martinez, 1,612 ft. S, 907 ft. E, NW cor. NW SW, Sec. 2-7-13 ..... Set 6-in. 2,084 ft.

Baird, Stone & McFaddin's No. 1 Duggan, 150 ft. S and W, NE cor. SE, Sec. 14-7-11 ..... Testing 2,637 ft.

C. W. Beene et al's No. 1 Cutrer, 200 ft. N and E, SW cor. NW, Sec. 12-7-11 ..... Derrick.

Bridges & Clark's No. 4 Williams, 60 ft. N, 250 ft. W, SE cor. NE SW, Sec. 33-10-12 ..... Drlg. 1,760 ft.

Cameron Oil Co.'s No. 1 G. Martinez, 845 ft. E, 540 ft. N, SW cor., Sec. 2-7-13 ..... Set 10-in. 41 ft.

Capitol-Crescent Oil Co.'s No. 1 Sabine State Bank, 990 ft. E, 528 ft. N, SW cor. NW SW, Sec. 2-7-13 ..... Derrick.

Capitol-Crescent Oil Co.'s No. 1 Byrd, 340 ft. W, 350 ft. S, NE cor. SE NW, Sec. 1-7-11 ..... Set 10-in. 40 ft; drlg. 1,000 ft.

T. B. Carpenter's No. 1 Cutrer, 330 ft. S and E, NW cor. SE, Sec. 13-7-11 ..... Rigging up.

Coates Pet. Co., Inc.'s No. 1 Gray, 200 ft. S, 32 ft. E, NW cor. SE SW, Sec. 3-7-13 ..... Set 6-in. 2,246 ft.

Continental Drlg. Co.'s No. 1 Leone est., 70 ft. N, 200 ft. W, SE cor., Sec. 31-8-13 ..... Derrick.

Craig et al's No. 1 Pouder, 330 ft. N and E, SW cor. SE NW, Sec. 15-7-11 ..... Derrick.

Crescent Drlg. Co.'s No. 1 Peters, 330 ft. N and E, SW cor. SE SW Sec. 2-7-11 ..... Location.

Edwards & Hubler's No. 1 G. Martinez, 510 ft. S, 280 ft. E, NW cor. SW SW, Sec. 2-7-13 ..... Derrick.

V. R. Hammons et al's No. 1 Travis, 540 ft. N, 150 ft. E, SW cor. NW SE, Sec. 13-7-11 ..... Drlg. 960 ft.

D. D. Holcomb's No. 2 Quayhagiew, 149 ft. N, 200 ft. E SW cor. SE SE, Sec. 11-7-11 ..... W.O.S.R. 2,652 ft.

J. B. Hughes' No. 1 Johnson, 250 ft. S, 670 ft. E, NW cor. SW NW, Sec. 2-7-11 ..... Testing 2,341 ft.

E. L. Hunt's No. 2 Livingston, 330 ft. S and E, NW cor. SW NW, Sec. 9-7-11 ..... Location.

Imperial Producers Co.'s No. 1 Leone Est., 1,384 ft. S, 660 ft. E, NW cor., Sec. 32-8-12 ..... Location.

M. M. Jones' No. 1 Raines, 300 ft. S, 150 ft. W, NE cor. NW NW, Sec. 14-7-11 ..... S.D. 2,410 ft.

Lanier et al's No. 2 Steinhorst, 150 ft. S and W, NE cor. SE NW, Sec. 3-7-13 ..... W.O.S.R. 2,450 ft.

Lee & Burnett's No. 1 Travis, 510 ft. S, 150 ft. E, NW cor. NE NW, Sec. 13-7-11 ..... Fishing for tubing 2,661 ft.

Lion Oil Ref. Co.'s No. 2 LaRoux, 384 ft. S and W, NE cor. SW SE, Sec. 3-7-13 ..... Location.

Loring Oil Co.'s No. 21 Bowman-Hicks, 450 ft. S, 275 ft. E, NW cor. SW NW, Sec. 16-7-12 ..... Drlg. 4,375 ft.

Magnolia Pet. Co.'s No. 3 Williams, 150 ft. S, 200 ft. E, NW cor. NE NW, Sec. 6-7-10 ..... Comp. flowing 1,296 bbls. 2,502 ft.

L. M. McGuffin's No. 1 Chadick, 300 ft. N, 275 ft. E, SW cor. NE SE, Sec. 31-8-10 ..... Drlg. 2,380 ft.

Frank Melat's No. 1 Davis, 175 ft. W, 225 ft. S, NE cor., Sec. 2-7-11 ..... S.D. 2,572 ft.

C. D. Neff, tr.'s No. 2 Snell, 400 ft. E, 330 ft. N, SW cor. SE SE, Sec. 9-7-11 ..... Derrick pattern.

E. F. Neely's No. 3 Pouder, 200 ft. S, 190 ft. E, NW cor. NW, Sec. 15-7-11 ..... Dry and abd. 2,550 ft.

E. F. Neely's No. 4 Pouder, 220 ft. E, 225 ft. S, NW cor. SW SW, Sec. 15-7-11 ..... Rigging up.

Pelican Nat. Gas Co.'s No. 16 La. Long Leaf Lbr. Co., 86 ft. S, 544 ft. W, NE cor. NW NE, Sec. 10-7-11 .... W.O.S.R. 2,627 ft.

Pelican Nat. Gas Co.'s No. 9 Sabine Lbr. Co., 200 ft. N and E, SW cor. NE SW, Sec. 3-7-13 ..... W.O.S.R. 2,400 ft.

Pelican Nat. Gas Co.'s No. 3 Buckley, 330 ft. N and W, SE cor. SW SW, Sec. 31-8-10 ..... Set 10-in. 41 ft; drlg. 1,932 ft.

Pelican Nat. Gas Co.'s No. 17 La. Long Leaf, 330 ft. S and E, NW cor. NE NW, Sec. 31-8-11 ..... Derrick.

T. L. Phillips et al's No. 1 Haley, 330 ft. S and E, NW cor. NW SE, Sec. 6-7-12 ..... Derrick.

H. C. Pitts et al's No. 1 Trammell, 1,037 ft. S, 150 ft. E, NW cor. NE NE, Sec. 5-7-11 ..... Location.

Ritchie Prod. Co.'s No. 1 Byrd, 503 ft. N, 399 ft. W, SE cor. NE NW, Sec. 1-7-11 ..... Comp. pumping 50 bbls. 2,465 ft.

Rotary Oil Corp.'s No. 1 Hale, 330 ft. S and E, NW cor. SW, Sec. 1-7-13 ..... Derrick pattern.

W. H. Rowe et al's No. 1 Cutrer, 330 ft. N and E, SW cor. NE, Sec. 13-7-11 ..... Set 10-in. 42 ft.

C. T. Ruffin's No. 1 Lilly, 545 ft. S, 200 ft. W, NE cor. NW NW, Sec. 8-7-11 ..... Drlg. 2,000 ft.

Sabine Prod. Co.'s No. 3 Sabine Lbr. Co., SW cor. NW SE, Sec. 3-7-13 ..... Dry and abd. 2,450 ft.

Scully & Beach's No. 4 Lafitte, 225 ft. E, 197 ft. S, NW cor. SW NW, Sec. 13-7-11 ..... Derrick.

Scully & Beach's No. 5 Lafitte, 413 ft. S, 190 ft. W, NE cor. SW NW, Sec. 13-7-11 ..... Derrick.

E. M. Self's No. 2 Henderson, 325 ft. N and E, SW cor. SE SE, Sec. 31-8-10 ..... Drlg. 1,500 ft.

Simmons et al's No. 1 Fleming, E half SE SE, Sec. 11-8-13 ..... Moving in rig.

Skidmore Oil Co.'s No. 3 G. Martinez, 330 ft. S and W, NE cor. SE SE, Sec. 3-7-13 ..... Drlg. 2,220 ft.

Scully & Beach's No. 3 Lafitte, 1,030 ft. S, 134 ft. E, NW cor., Sec. 13-7-11 ..... Set 6-in. 2,390 ft.

Ben F. Smith's No. 3 Turner, Sec. 4-7-11, 1,340 ft. E, 200 ft. S, NW cor., Sec. 4-7-11 ..... Set 6-in. 2,336 ft.

F. E. Stancil's No. 1 Pouder, 273 ft. S, 397 ft. E, NW cor. NE SE, Sec. 10-7-11 ..... S.D. 2,593 ft.

State Prod. Co.'s No. 1 Keazele, 150 ft. N and W, SE cor. NW SW, Sec. 3-7-13 ..... W.O.S.R. 2,427 ft.

State Prod. Co.'s No. 1 Lites, 150 ft. S and W, NE cor. SE SW, Sec. 28-8-11 ..... Derrick.

State Prod. Co.'s No. 1 Sabine Lbr. Co., 365 ft. N, 100 ft. W SE cor. NW SW Sec. 3-7-13 ..... S.D. 2,427 ft.

H. H. Stout et al's No. 1 Byrd, 150 ft. N and E, SW cor. NW NW, Sec. 1-7-11 ..... S.D. for csg. 2,332 ft.

Turnbow & Lacey's No. 1 McNeely, 550 ft. E, 220 ft. N, SW cor. NE NE, Sec. 14-7-11 ..... Set 4½-in. 2,433 ft; T.D. 2,515 ft.

C. H. Tuttle's No. 3 Byrd, 700 ft. E, 510 ft. S, NW cor., Sec. 7-7-10 ..... W.O.S.R. 2,727 ft.

J. H. Watt et al's No. 1 Pouder, 200 ft. S, 135 ft. W, NE cor. NW NE, Sec. 15-7-11 ..... Derrick.

B. R. White et al's No. 1 Stille, 620 ft. W, 205 ft. N, SE cor. NE SW, Sec. 35-8-13 ..... Set 10-in. 160 ft.

J. P. White's No. 1 Nulton, 330 ft. N and E, SW cor. NE NW, Sec. 1-7-13 ..... S.D. 2,455 ft.

UNION PARISH

G. H. McHenry, tr.'s No. 1 Potts, 2,044 ft. N, 394 ft. W, SE cor. NE, Sec. 15-21-3e ..... Derrick pattern.

Southern Carbon Co.'s No. 62 fee, 1,920 ft. S and W, NE cor. NW, Sec. 30-20-4e ..... Set 12-in. 183 ft; set 8-in. 770 ft.

Arkansas

UNION COUNTY—URBANA

Marine Oil Co.'s No. 1 Winn est., 330 ft. S and E, NE cor. S½ NW, Sec. 11-18-13 ..... T.A. 3,586 ft

Marine Oil Co.'s No. 2-E Thompson, 330 ft. N, 330 ft. E, SW cor. NE NE, Sec. 10-18-13 ..... Location

Wilson & Chapman's No. 1-B Hadley, Sec. 3-18-13, 330 ft. S and W, NE cor. SE NW ..... T.A. 3,545 ft

Wilson & Chapman's No. 2 Emily King, Sec. 3-18-13, 150 ft. S, 150 ft. E, NW cor. NE NE ..... S.D. 1,730 ft

East Texas

PANOLA COUNTY

Daisy O. & G. Co.'s No. 1 Rucks, John Palmer Sur. ..... S.D. 2,359 ft

Mississippi

RANKIN COUNTY

James Alexander's No. 2 Hurst, 826 ft. E, 560 ft. N, SW cor. NW NW, Sec. 7-5n-2e ..... Rigged up and spudding in.

Love Pet. Co.'s No. 1 Spann, 1,120 ft. W, 200 ft. S. NE cor., Sec. 13-5n-1e ..... Set 8¼-in. 764 ft; drlg. 1,700 ft.

J. A. Matson et al's No. 1 Warner, 1,100 ft. S, 200 ft. W, NE cor. W½ SE, Sec. 14-5n-1e.....Waiting on csg. 2,477 ft.

Wildcat Operations in Mississippi

AMITE COUNTY

Company, well, farm name, section and block—	Remarks:
Magnolia State O. & G. Co.'s No. 1 Anderson, C NE NW, Sec. 14-3n-3e	S.D. 400 ft.

CLARKE COUNTY

F. X. Gowans et al's No. 1 Eifring, SE NE, Sec. 13-1n-14e.	S.D. 104 ft.

HINDS COUNTY

Love & Lancaster's No. 1 Elton Plantation, C SE, Sec. 17-4n-1e	Drlg. 3,580 ft.
National Gas Co.of Miss.' No. 1 M. C. Halder, 160 ft. E, 660 ft. N, SW cor., Sec. 16-4n-1e	S.D. for csg. 810 ft.

JASPER COUNTY

B. B. Jones' No. 1 Bank of Philadelphia, 660 ft. N and W, SE cor., Sec. 35-3n-12e	Set 15¾-in. 161 ft.

LAMAR COUNTY

Chas. W. Gorr et al's No. 1 Jordan, NW C of SW, Sec. 1-2n-15w	Derrick.
Stauffer & Kouri's No. 1 Bond, SE NE, Sec. 13-2n-14w	D.S. stuck 3,006 ft.

LOWNDES COUNTY

Lowndes County Oil & Dev. Co.'s No. 1 Carr est., Sec. 34-17-16e, 1,320 ft. E, 330 ft. S, NW cor. Sec.	S.D. 2,200 ft.

MONROE COUNTY

P. J. McAlpine's No. 1 Rye, Sec. 22-15s-17w	S.D. 1,777 ft.

NEWTON COUNTY

Bob Dalton's No. 1 Majure, 400 ft. N, 300 ft. E, SW cor. SE, Sec. 25-6n-11e	S.D. 1,754 ft.

RANKIN COUNTY

Home Oil Prod. Corp.'s No. 1 So. Jackson Land Co., 85 ft. S, 130 ft. W, NE cor. NW NW, Sec. 23-5n-1e	S.W. and abd. 2,500 ft.
Love Pet. Co.'s No. 2 Int. Lbr. Co., 450 ft. S and E, NW cor., Sec. 28-6n-2e	T.A. 2,657 ft.
Majestic O. & G. Co.'s No. 1 Elton Lbr. Co., Sec. 10-4n-3e	Derrick.

SCOTT COUNTY

M. U. Culley et al's No. 1 Owens, Sec. 2-8-9	S.D. 750 ft.

Wildcat Operations in Alabama

LAMAR COUNTY
(Cable tools)

Company, well, farm name, section and block—	Remarks:
DeSoto O. & G. Corp.'s No. 1 Gardner, NW NW, Sec. 23-15s-16w	Drlg. 3,260 ft.

MOBILE COUNTY

J. C. Prine et al's No. 1 M.&O.R.R., Sec. 33-2n-4w	Drlg. 3,540 ft.

WASHINGTON COUNTY

South Alabama O. & G. Co.'s No. 1 Wilson, Sec. 36-7n-1w.	Drlg. 2,242 ft.

Wildcat Operations in Southwest Texas

(Continued from Page 45)

BEE COUNTY

Fitzgerald & Pryer's No. 1 Albert Johnson in M. Alcarte Sur. ..... Abnd. location.
Nichols & Bruner's No. 1 Grover Heldenfels in John Bryan Sur., 891 ft. from S line, 1,950 ft. from E line of tract ..... T.D. 2,100 ft.; S.D.
Southwest Drlg. Co.'s No. 1 Riggs, 200 ft. from N line, 4,200 ft. from E line of James Nowland Sur. ..... T.D. 3,000 ft.; abnd.

BELL COUNTY

Alex Krause' No. 1 W. P. Edds, 650 ft. from S line, 150 ft. from W line of 100-ac. tract in M. Moreno Sur. ..... T.D. 712 ft.; S. D.
James Scoggins' No. 2 Warrick, Ingram Sur. ..... T.D. 1,432 ft.; cleaning out.

BEXAR COUNTY

Amsden-Ingersoll-Miller's No. 1 Strumberg, 450 ft. to W line, 1,020 ft. to N line of tract, 12 miles SW of San Antonio ..... T.D. 1,054 ft.; standing.
S. W. Blount's No. 1-A S. A. Land & Dev. Co., 10 ft. from No. 1 in I. Perez Sur. ..... T.D. 965 ft.; moving in rotary.
L. S. Bolling's No. 1 W. Kelso, 150 ft. from N and E lines of tract in Urregas Sur. ..... T.D. 1,465 ft.; abnd.
Robert C. Hill's No. 1 Schell, 1,300 ft. from N line, 1,100 ft. from W line of 161-ac. tract in Sec. 234, Perretaux Sur. ..... Drlg. 830 ft.; in rock.
Rollin V. Hill, Sr.'s No. 1 Max Boeck, 1,700 ft. from N line, 2,700 ft. from E line of tract in J. R. Shepherd Sur. ..... T.D. 250 ft.; drlg.
F. E. Kestler's No. 1 Cover, 330 ft. from S and E lines of tract in Miguel Fortaris Sur. No. 5 ..... Moving in rig.
Dr. Ewell Neil's No. 1 J. Watson, 500 ft. from W line, 1,700 ft. from S line of B. Martinez Sur. ..... T.D. 2,495 ft.; in Edwards, dry.
Otis Oil Co.'s No. 1 Bachmeyer, 150 ft. from NE and SE lines of 425 acres in J. Montez Sur. ..... T.D. 600 ft.; fishing.
Jones & Voltz' No. 1 Bonkowsky, 150 ft. to N and W lines of William McMenenes Sur., 12 miles E of San Antonio ..... T.D. 907 ft.; standing.
Schneider, Rees et al's No. 2 Claussen, 12 miles NE of San Antonio ..... T..D 1,330 ft.; S.D.
M. E. Trussell's No. 1 L. B. Carruthers, Sr., 2,000 ft. from W line, 400 ft. from most easterly N line of tract in Sam McCullough Sur. ..... T.D. 1,004 ft.; bailing heavy oil.
H. G. Venable's No. 2 F. Dulling, 1,500 ft. W of center of E line of tract ..... Location.

BLANCO COUNTY

Hardy Sitton's No. 1 Luders, 150 ft. from S line, 1,420 ft. from E line of James Stanford Sur. ..... T.D. 1,540 ft.; standing.

BROOKS COUNTY

M. P. Evans' No. 1 Amanda Perez, 1,300 ft. from N line, 200 ft. from W line of Sec. 6, La Encantada grant ..... T.D. 1,480 ft.; standing.

CALDWELL COUNTY

Cargill et al's No. 1 Dameron, 150 ft. from N and W lines of 72.5-ac. tract in Dillard Cooper Sur. ..... T.D. 1,829 ft.; bailed dry.
J. M. Dickson's No. 1 W. T. Mooney, 7,600 ft. from NE line, 5,200 ft. from SE line of Solomon Seal Sur. ..... T.D. 500 ft.; drlg.
E. D. Herne's No. 1 M. C. and P. W. Jeffrey 126-ac. tract, 150 ft. from N and E lines of tract in James George Sur. ..... Set surface pipe, waiting for wtr.
E. L. Hope and Joe Cole's No. 1 M. August, 150 ft. from NE line, 165 ft. from NW line of tract in A. Floyd Sur. ..... Rigged up.
J. W. Kemp's No. 1 George Vickery, 760 ft. from SE line, 200 ft. from NE line of tract in Squire Damon Sur. ..... Set surface csg.
Noack & Lanning's No. 1 Barber, 150 ft. from S and E lines of 82-ac. tract in Squire Damon Sur. ..... T.D. 1,530 ft.; drlg.

COMAL COUNTY

Caldwell and M. Lanier's No. 1 T. J. Byler, 175 varas from W line, 370 varas from N line of 320-acre tract in H.E.&W.T. Sur., Sec. 894... ..... T.D. 931 ft.; drlg.

DIMMITT COUNTY

Motes-Campbell Co.'s No. 1 Denton, 150 ft. from E line, 250 ft. from S line of Tracts 33 and 34 in Sec. 60 of Denton Colony Subd. ..... T.D. 1,200 ft.; setting csg. to shut out water.

DUVAL COUNTY

J. E. Anderson's No. 1 Wood-Welder, 115 ft. from W line, 400 ft. from N line of Sur. No. 71 ..... T.D. 2,150 ft.; drlg.
Al Buchanan's No. 1 Foster, 990 ft. from E line, 1,520 ft. from S line of Sur. 268 ..... T.D. 2,112 ft.; drlg.
Buchanan & Terrell's No. 1 Duval County Ranch Co., 990 ft. to W line, 1,120 ft. to S line of Sur., No. 96... T.D. 2,489 ft.; abnd.
Duggan & Smith's No. 2 Sutherland, 330 ft. from S and W lines of Sur. No. 511 ..... T.D. 1,894 ft.; standing.
Frank Gravis' No. 3 Schallert in Sur. 255 (Palangano salt dome) ..... T.D. 1,653 ft.; standing.
J. A. Leindecker's No. 1 G. W. Sutherland, 560 ft. from S line, 450 ft. from W line of Sur. No. 183 ..... T.D. 1,803 ft.; standing.
Payne & Vernon's No. 1 A. Roach, 865 ft. from E line, 45 ft. from S line of Blk. 7, Sur. No. 457 ..... Rigged up.
Plymouth Oil Co.'s No. 1 Hoffman, cen. of Sur. 113 ..... T.D. 3,430 ft.; drlg.
C. P. Scott's No. 1 J. W. Kidd, 990 ft. from N and E lines of SE of Sur. No. 56 ..... Rigging up.
Smith & Capps' No. 1 Peters, 330 ft. from S line, 340 ft. from W line of NE of Sur. No. 178 ..... Rigging up.
Sun Oil Co.'s No. 1 Duval County Ranch Co., 1,650 ft. to N and W lines of Sur. No. 78, or 330 ft. to S and W lines of E half of NW of Sur. No. 76 ..... T.D. 2,155 ft.; bailing.
S.R.C. Oil Co.'s No. 1 Duval County Ranch Co., 150 ft. from N line, 4,200 ft. from W line of Sur. 192.... T.D. 700 ft.; drlg.

FRIO COUNTY

Amerada Pet. Corp.'s No. 1 Halff & Oppenheimer, 1,200 ft. from N line, 200 ft. from E line of W. F. Halsel Sur. ..... T.D. 4,785 ft.; plugging back to straighten hole.

GILLESPIE COUNTY

Rod Lagray's No. 1 Stephen, 500 ft. from N and W lines of A.B.&M. Sur. No. 969 ..... Spudded in.

GUADALUPE COUNTY

B. E. Brock's No. 1 Ogletree, 1,600 ft. from W line, 450 ft. from S line of tract in Robert Smith Sur..... T.D. 1,890 ft.; standing.
Keene & Russell's No. 1 Lowman, 300 ft. from E line, 350 ft. from N line of tract in George Allen Sur. .... T.D. 380 ft.; standing.
W. A. Scrutchin's No. 1 S. J. Lowman, 170 ft. from N line, 195 ft. from W line of 10-ac. tract, in Blk. 1, Sec. No. 1 of S. J. Barnes Sur. ..... Derrick.
H. A. Suttle's No. 1 O. J. Halm, 150 ft. from N line, 1,900 ft. from E line of 331-ac. tract in J. Kent Sur. ..... T.D. 2,100 ft.; drlg.
H. A. Suttle's No. 2 Halm, 525 ft. due S of No. 1 Halm in Jos. Kent Sur. ..... T.D. 60 ft.; set surface csg.
J. T. Stover's No. 1 Paul Hoffman, 1 mile SW of Salmar Pool. ..... T.D. 2,100 ft.; drlg.
F. W. Tong's No. 1 Henry Rahe, 650 ft. to SW lines, 1,300 ft. to NW lines, Moses Baker Sur. ..... T.D. 400 ft.; drlg.
Walton et al's No. 1 Dan Darling in Ben Fuqua Sur. ... Derrick.

GOLIAD COUNTY

Hoffman & Gooch's No. 1 Fromme, 600 ft. from N and 1,200 ft. from W line of Peter B. Dexter Sur. ..... T.D. 2,470 ft.; standing.

GONZALES COUNTY

Antibus et al's No. 1 James, 6,350 ft. from N line, 1,300 ft. from E line of Mary A. Williams Sur. ..... T.D. 1,247 ft.; coring.
Edmiston & Kirby Pet. Co.'s No. 1 J. W. Ward, Jr., 300 ft. from N line, 833 ft. from W line of tract in Dan McKay Sur. ..... T.D. 1,592 ft.; standing.
Kirby Pet. Co. and Bennett's No. 1 Lum & Boulder, 1,100 ft. to SE lines, 100 ft. to SW lines, Russell Ward Sur. ..... T.D. 4,868 ft.; drlg.
Luling Oil & Gas Co.'s No. 2 Dubose, 5,000 ft. from NW line, 5,080 ft. from SW line of F. R. Whitney Sur.... T.D. 2,994 ft.; abnd.
Dave Watson, trustee's No. 1 Cardwell, Byrd Lockhart Sur., 7 miles S Gonzales ..... Moving in tools.

HIDALGO COUNTY

Barrett-Kanellos' No. 1 J. B. Brock, 7 miles W and N from Mission (on Monte Cristo road) ..... T.D. 4,590 ft. S.D.
Palm City Pet. Co.'s No. 1 J. T. Lomax, 7,500 ft. from S and E lines of San Roman Sur. ..... T.D. 1,445 ft.; drlg.
Dayle L. Smith's No. 3 Daskam, SW part of county..... T.D. 1,726 ft.; S.D.

JIM HOGG COUNTY

Cole Pet. Co.'s No. 1 W. Allen, 990 ft. to E line, 1,320 ft. to N line of Blk. 13, Randado grant ..... Location.
D. C. DeWitt's No. 1 Gomez, 1,110 ft. from N line, 150 ft. from W line of Sur. No. 12, SW part of county .. T.D. 1,690 ft.; drlg.

JIM WELLS COUNTY

F. A. Lain's No. 1 Vernon Porter, 800 ft. from S line, 400 ft. from W line of 200-ac. tract in Sur. 25 ..... TD. 2,782 ft.

KARNES COUNTY

A. E. Edmiston's No. 1 G. W. Cross, 500 ft. from E line, 150 ft. from N line of tract in M. N. Reed Sur. ..... Moving in rig.
H. J. Porter et al's No. 1 Ingram, 275-ac., 1,500 ft. from E line, 300 ft. from S line of tract in Carolos Martinez Sur. ..... Rigging up.
Tippett & Mull's No. 1 Smith, 8,500 ft. from N line, 200 ft. from E line of Francis Haskins Sur., 3½ miles E of Helena ..... Rigging up.

KERR COUNTY

Evans & Gant's No. 1 Estelle Young, 150 ft. out of NW cor. of Sec. 28, E. A. Burge Sur. ..... T.D. 1,310 ft.; standing.
Evans et al's No. 1 Jeff Love, 150 ft. to S and E lines of C.C.S.D.&R.G.N.G. Sur. No. 1,595 ..... Rigging up.
Van Duyn & Moore's No. 1 Nowlin, 2,000 ft. from E line, 2,200 ft. from N line of James R. Bettner Sur... T.D. 150 ft.; drlg.
Verde Oil & Gas Co.'s No. 1 J. D. Witt, 1,320 ft. from N line, 1,320 ft. from W line of Sec. 1,923 in Hamilton Sur. ..... T.D. 118 ft.; standing.

KLEBERG COUNTY

H. Carter's No. 1 R. H. Simmons, 150 ft. from S and W lines of tract in Sec. 7, King Sur. No. 3..... T.D. 3,205 ft.; standing.
Harris et al's No. 1 Dennett, 600 ft. from S line, 760 ft. from E line of Blk. 7, Sec. 38, Kleberg Town & Imp. Co. Subd. ..... T.D. 160 ft.; standing.

LA SALLE COUNTY

Interstate Oil Industries, Inc.'s No. 1 J. F. Mayes, 600 ft. from S and W lines of Blk. 20, I.&G.N. Sur. No. 19 ..... Location.

LIVE OAK COUNTY

J. A. Harper's No. 1 fee, 2,130 ft. to N line, 510 ft. to E line of farm, J. Pointevant Sur. 37 ..... T.D. 1,100 ft.; waiting for csg.
C. J. Webster Oil & Gas Co.'s No. 1 O. F. Akers, 300-ac. tract in T. Henry Sur. ..... T.D. 100 ft.; standing.

LEE COUNTY

Paton Bros.' No. 2 Turner, 150 ft. due SE of No. 1-A Turner, junked at 5,675 ft. in the David Hudson Sur., 2 miles SE from Tanglewood ..... Location.

McMULLEN COUNTY

Jaqua & Crow's No. 1 Hagist, 330 ft. from N and W lines of R. W. Mills Sur. No. 467 ..... Spudded in.
C. C. Shumway's No. 1 Shiner, 400 ft. from W line, 200 ft. from N line of Blk. 45 of Shumway Subd. of Shiner ranch ..... Rigged up.
Skinner & Bailey's No. 1 Burmeister in SW cor. of Sec. 14, Blk. 1, C.H.&H. Ry. Sur. ..... T.D. 60 ft.; set surface csg.

MEDINA COUNTY

James E. Greenlea's No. 1 Feasler, 600 ft. from N line and 2,400 ft. from E line of L. G. Harrison Sur. No. 799 ..... T.D. 1,230 ft.; set csg.
F. Ryal's No. 1 G. Martin, 150 ft. from S and W lines of Blk. 368, H. Castro Sur. ..... Spudded in and S.D.
W. L. Umburn's No. 4 Jungman, 150 ft. from N line, 450 ft. from E line of tract in N. B. Rogers Sur., No. 33 ..... T.D. 816 ft.; set csg.

MILAM COUNTY

Bridwell's No. 1 Terry, 1,100 ft. from N line, 800 ft. from W line of tract in Jose Leal Sur. ..... T.D. 1,250 ft.; drlg.
Ed Clark's No. 1 Pritchard, 1,100 ft. to SE lines, 700 ft. to NE lines of 163-ac. tract in F. Ernst Sur., 6½ miles NE Thorndale ..... Rigged up.
M. W. Elser's No. 1 Citizen's Nat. Bank of Waco, 1,325 ft. from S line, 625 ft. from E and W lines of tract in Wm. Punchard Sur. ..... T.D. 2,410 ft.; abnd.

Glass et al's No. 1 Ellison, 700 ft. from N line, 1,350 ft. from W line of 200-ac. tract in Samuel Frost Sur....T.D. 1,665 ft.; drlg.
Huff & Keck's No. 1 J. W. Lee, 1,200 ft. to E line, 265 ft. to S line, D. Harmon Sur. ....T.D. 1,492 ft.; standing.
Michaik & Clark's No. 1 Johnson, 60 ft. S of No. 1 Johnson on 100-ac. lease in Juan Jose Acosta Sur....T.D. 2,208 ft.; S.D.
M. C. Moore et al's No. 1 H. A. Camp, east of San Gabriel ....T.D. 1,085 ft.; drlg.
Wilder, Van Huss & Edliston's No. 1 Von Groton in M. J. Delgado Sur. ....T.D. 2,870 ft.; abnd.

NUECES COUNTY

Gulf Port Oil Co.'s No. 1 Luby, 2,044 ft. from E line, 2,142 ft. from S line of John M. Luby, 531.74 acres, Blk. 1 of Mary J. Luby Share 1-G of Anna Collins Petronilla pasture, 24 miles SW from Corpus Christi..T.D. 3,050 ft.; drlg.
Miller et al's No. 1 Harney, 200 ft. from NW line, 1,850 ft. from SW line of 445-ac. tract in Gregoria Farias Sur. ....Moving in tools.
George Noble's No. 1 Homeland Syndicate, 300 ft. to SE and SW lines of Blk. 8, Sec. 12, 5 miles S Corpus Christi ....Location.

ROBERTSON COUNTY

Everts Drilling Co.'s No. 1 Cook ....Drlg. 1,420 ft.

SAN PATRICIO COUNTY

Chiltipin Oil & Gas Co.'s No. 1 E. H. Welder, 1,750 ft. from N line, 660 ft. from W line of tract in Blk. 5, Portilleo Sur. ....T.D. 5,270 ft.; drlg.

STARR COUNTY

Adams & Modest's No. 1 Wood, 2,070 ft. from W line of Porcion 84, Camargo, and 1,472 ft. N of Missouri Pacific Railroad ....Derrick.
Hartshorn et al's No. 1 Hinijosa, 825 ft. W of Hebbronville road and 2,500 ft. from S line of Porcion 110....Location.
B.&B. Oil Co.'s No. 1 Crown Brick & Tile Co., 1,800 ft. S of State Highway No. 4 and 580 ft. from W line of Porcion 87, near La Puerta ....T.D. 2,005 ft.; testing.
D. H. Carpenter's No. 1 Salinas, 2,087 ft. from N line, 1,221 ft. from E line of Share 85 of partition of Porcions 38, 39, 40 in Jurisdiction of Reynosa ....T.D. 1,450 ft.; drlg.
W. P. Chancellor's No. 1 A. Guerra, 24,000 ft. N of SW cor. and 2,600 ft. from W line of Share 6 in the Joe Grant Sur. ....Rigging up.
Coastal G. & G. Co.'s No. 1 Kelsey Bass, 448 ft. to N line, 150 ft. to W line of Tract 52, Sur. 2, Porcion 86..T.D. 1,790 ft.; abnd.
W. T. Gilman & Travelers Oil Co.'s No. 1 C. Ramos, 1,170 ft. from SW line, 1,470 ft. from NW lines of Sur. No. 150 ....Spudded in and S.D.
Great Plains Oil Co.'s No. 1 Sanchez, 660 ft. from W line, 330 ft. from S line of SE of NW of Sur. No. 344 ....Rigging up.
H. C. Harter's No. 1 Gonzales, 990 ft. from N line, 1,150 ft. from E line of Share 62-B of Subd. of Porcions 70 and 71, Jurisdiction of Mier ....T.D. 410 ft.; standing.
Jeffries and Lambeth Drilling Co.'s No. 1 Starr County Cattle Co., 11,572 ft. from N line, 2,490 ft. from E line of Porcion 89, Jurisdiction of Camargo ....T.D. 920 ft.; drlg.
LaJoya Oil & Gas Co., making location in Porcion 29 in NE part of county ....Location.
Morrison et al's No. 1 V. G. Guerra, 1,980 ft. from SW line, 450 ft. from SE line of Sur. No. 23 ....T.D. 400 ft.; standing.
John Pope, trustee's No. 2 H. Gonzales, 150 ft. W of cen. of E line of Sur. No. 339 ....Location.
Smith et al's No. 1 Lopez, 200 ft. from E line, 1,000 ft. from S line of Blk. 20, Share 65 of Porcion 80, Jurisdiction of Camargo ....T.D. 1,515 ft.; drlg.
George Stobaugh's No. 1 Seabury et al, 150 ft. from S and W lines of Porcion 107 ....T.D. 278 ft.; no report.

TRAVIS COUNTY

E. A. Field's No. 1 B. H. Bloor, 150 ft. from S line, 500 ft. from W line of 400-ac. tract in NE part of county..T.D. 510 ft.; drlg.
Franklin et al's No. 1 Reimer, 1,200 ft. from SE line, 1,400 ft. from most southerly SW line of Sur. 35 ..Spudded in.
Fritz Fuch's No. 1 Swedish, 2,350 ft. from NE line, 750 ft. from NW line of Thomas Smith Sur. ....T.D. 1,788 ft.; S.D.

UVALDE COUNTY

J. V. Scoggin's No. 1 Olive Henry, 1,100 ft. from N and E lines of tract in Hugh Kilgore Sur. ....T.D. 510 ft.; drlg.

WEBB COUNTY

J. W. Edwards' No. 1 M. D. Slator, 1,320 ft. to NE and NW lines of Blk. 72, Slator Subd. of J. V. Borrego grant ....Derrick.
Newton Drilling Co.'s No. 1 A. Garcia, 2,550 ft. from S line, 2,340 ft. from W line of Sur. No. 52, 2 miles SW of Carolina Texas Field ....T.D. 2,080 ft.; drlg., shows oil.

WILLIAMSON COUNTY

McLean et al's No. 2 R. C. Miller, 800 ft. to S line, 100 ft. to W line of tract in B. Manlove Sur. ....T.D. 940 ft.; S.D.

ZAPATA COUNTY

C. B. Bunte, Inc., et al's No. 1 Gutierrez, cen. of S half NW Blk. 5, Jose V. Borrego grant, 8 miles NE San Ignacio ....Dropped, duplication.
Donohoo et al's No. 1-A Garcia, 150 ft. from NE and SE lines of Blk. 7 of Subd. of 700-ac. of Share A, Charco Redondo grant ....T.D. 1,085 ft.; standing.
Huff & Fudge's No. 1 Uribe, 150 ft. from NW and SW lines of Blk. 8, Share 7, Partition 6, San Ignacio Subd. of Borrego grant ....T.D. 586 ft.; drlg.
F. J. Ossenbeck's No. 1 Adelfonso Rameris, 600 ft. W of Zapata-Roma highway, 150 ft. from SE line of Porcion 18 ....Location.
Phelps, Taegel & Leyendecker's No. 1 Martinez, 150 ft. to N and W lines of Blk. 15 of S. T. Phelps, Jr. Subd. "A" of Villa grant ....Rigged up.
H. L. Sargent et al's No. 1 Antonio Gutierres heirs, 922 ft. from W line, 472 ft. from S line of Tract 2, Blk. 5, Nixon Subd., Porcion 10, San Ignacio Borrego grant ....T.D. 1,450 ft.; standing.
Winch & Billings' No. 1 S. Benavides, 1,018 ft. from NW line, 1,107 ft. from NE line of Blk. 2 of O'Hern & Fansler Subd. of Villa grant ....T.D. 1,673 ft.; set csg.

ZAVALA COUNTY

Adair & Daniel's No. 1 Gates, 1,320 ft. from N line, 1,220 ft. from E line of Hooper & Wade Sur. No .13..T.D. 3,215 ft.; resuming drlg.

Southwest Texas Proven Areas

Week Ending November 5

NORMANNA POOL—BEE COUNTY

Company, well, farm name, section and block— Remarks:
Gulf Coast Oil Co.'s No. 5 Hicks, 600 ft. E of Nichols Oil Co.'s No. 2 Hicks ....T.D. 405 ft.; set surface csg.

PETTUS FIELD—BEE COUNTY

J. L. Mauldin's No. 2 fee, 945 ft. to S line, 150 ft. to W line of farm, George A. Kerr Sur. ....Location.
United Prod. Co.'s No. 44 Ray, south offset to Gulf Coast Oil Co.'s No. 2 McKinney ....T.D. 600 ft.; drlg.

TULETA POOL—BEE COUNTY

Dirks Bros.' No. 1 fee, 165 ft. to S and E lines, Sec. 3, Ragsley Subd., Uranga grant ....T.D. 3,000 ft.; drlg.
Taber et al's No. 1 Harris, 150 ft. from N and W lines of Blk. 13, Sec. 13, Ragsley Subd. of Uranga grant ..Moving in rig.
The Texas Company's No. 2 Cox, 250 ft. from S and W lines of SE of SW of SW of Sec. 2, Ragsley Subd. of Uranga tract ....Location.
Wallace and Bowles' No. 1 Harris, 150 ft. from N line, 250 ft. from E line of Lot 12, Sec. 13 of Ragsley's Subd. of Uranga grant ....Derrick.

GAS RIDGE—BEXAR COUNTY

American Gas Co.'s No. 5 W. H. Kennon, 1,750 ft. from S line, 2,000 ft. from E line of 400-acre tract in Maria F. Rodriguez Sur. ....T.D. 2,230 ft.; standing.

ECKERT POOL—BEXAR COUNTY

Alamo Nat. Gas Co.'s No. 3 J. H. Gembler, 180 ft. from N and E lines of tract in A. Manachaca Sur. 51..T.D. 1,216 ft.; standing.
E. M. Carl's No. 1 F. Gembler, 160 ft. from N line, 750 ft. from E line of tract in J. Montez Sur. ....T.D. 825 ft.; standing.
F. H. Eckert & Son's No. 2 Boehner, 800 ft. from N line, 210 ft. from E line of 93-ac. tract in Boquar Sur. ....Location.
Gatlin Oil Co.'s No. 15 I. A. Beck, 150 ft. from S and E lines of tract in J. Montez Sur. ....Location.
Johnson Bros.' No. 1 Elsie Janszen, 150 ft. from SW line, 4,000 ft. from SE line of 139-ac. tract in J. Montez Sur. ....Rigging up.
W. R. Swearingen's No. 11 Halbardier, 400 ft. SE of No. 10 Halbardier, J. F. Perez Sur. ....Location.

ALTA MESA POOL—BROOKS COUNTY

Ed East's No. 3 Randolph Garcia, 1,000 ft. from S line, 200 ft. from W line of 2,161-ac. tract in La Escantada grant ....T.D. 100 ft.; standing.

DUNLAP POOL—CALDWELL COUNTY

Bob Rose's No. 2-B Walker 46-ac. tract, 360 ft. from NW line, 500 ft. from SW line of tract in Solomon Seal Sur. ....T.D. 2,255 ft.; standing.

SALT FLATS—CALDWELL COUNTY

Hickman et al's No. 1 C. A. Dickerson, 150 ft. N of cen. of S line of tract in John D. Rains Sur. ....T.D. 2,172 ft.; standing.

WEBSTER POOL—CALDWELL COUNTY

C. J. Webster Oil & Gas Co.'s No. 1 C. F. Robertson, 700 ft. from E line, 200 ft. from N line of 100-ac. tract, John A. Neill Sur. ....Derrick.

NORTH GOVERNMENT WELLS—DUVAL COUNTY

R. B. Byrd's No. 3 Wright, 660 ft. from W line, 330 ft. from N line of Sur. No. 101 ....Location.
Central Producers, Inc.'s No. 3 Tuck & Johnson, 330 ft. from N and E lines of SE SW of Sur. No. 42 ....T.D. 2,280 ft.; comp. 30 bbls. hr.
H. H. Coffield's No. 4 Wendt, 330 ft. from N line, 810 ft. from E line of SE of NE of Sur. No. 43 ....Drlg.
W. T. Daniels' No. 1 F. J. Smith, 200 ft. from N and W lines of SW of NE of Sur. No. 46 ....Location.
Hamill & Hamill's No. 2 C. W. Hahl, 330 ft. to N and W lines of N half of SE of Sur. No. 42 ....T.D. 2,313 ft.; comp. 25 bbls. hr.
Hamill & Hamill's No. 6 Hahl, 330 ft. from S and E lines of N half of SE of Sur. No. 42 ....T.D. 2,306 ft.; set csg.
Luse and others' No. 1 Hahl, 330 ft. from N and W lines of NW SE Sur. 45 ....T.D. 1,900 ft.; drlg.
Magnolia Petroleum Co.'s No. 11 R. Wendt, 330 ft. to N and E lines of NW SW, Sur. 44 ....T.D. 2,310 ft.; set csg.
Magnolia Pet. Co.'s No. 2 Bryan White, 330 ft. from N and E lines of NE of NE of Sur. No. 44....T.D. 2,261 ft.; set csg.
C. G. Porter's No. 1 J. T. Smith, 200 ft. from N and W lines of NW of NE of Sur. No. 46 ....Location.
San Diego Oil Corp.'s No. 5 E. Riley, 330 ft. from S and W lines of NW NW of Sur. No. 46 ....Location.
San Diego Oil Corp.'s No. 2 L. Bennett, 500 ft. N of No. 1, 250 ft. to W line of SE SW of Sur. No. 44....Spudded in.
San Diego Oil Corp.'s No. 4 E. Riley, 230 ft. from N line, 550 ft. from W line of NW NW of Sur. No. 46..Rigging up.
San Diego Oil Corp.'s No. 4 O. Bennett, 510 ft. from S line, 330 ft. from E line of NE SW of Sur. No. 44...T.D. 2,298 ft.; set csg.
Southwest Drlg. Co.'s No. 4 R. Wendt, 330 ft. from N and E lines of SE SE of Sur. No. 43 ....T.D. 2,290 ft.; coring.
Southwest Drlg. Co.'s No. 5 Wendt, 330 ft. from N and W lines of NE of SE of Sur. No. 43 ....Location.
Southwest Drlg. Co.'s No. 6 Wendt, 330 ft. from S and E lines of NE of SE of Sur. No. 43 ....Moving in rig.
The Texas Co.'s No. 1 C. W. Freer, 150 ft. from S and E lines of SE NE of Sur. No. 45 ....Location.
The Texas Co.'s No. 2 M. B. Johnson, 330 ft. from N and E lines of S half S half NW of Sur. 42 ....T.D. 2,260 ft.; comp. 100 bbls. hr.
The Texas Company's No. 3 M. B. Johnson, 330 ft. to E line, 990 ft. to S line of NE SW, Sur. 42 ....T.D. 2,150 ft.; drlg.
Whisenant, Trenchard and French Oil Co.'s No. 3 Hahl, 620 ft. from S line, 250 ft. from E line of SW of SW of Sur. No. 44 ....Location.

SOUTH GOVERNMENT WELLS FIELD—DUVAL COUNTY

Humble Oil & Refining Co.'s No. 8 Paul White, 1,650 ft. to W line, 4,290 ft. to S line, Sur. 58 ....Set surface csg.
Humble Oil & Refining Co.'s No. 9 Paul White, 1,320 ft. to W line, 4,950 ft. to S line, Sur. 58 ....Location.
The Texas Co.'s No. 5 Bishop Cattle Co., 1,750 ft. from W line, 1,020 ft. from S line of Sur. 135 ....Rigging up.

COLE POOL—DUVAL COUNTY

Cole Pet. Co.'s No. 79 Benavides, 25 ft. from NW line, 77 ft. from NE line of Blk. 12, Sur. 20, Mariana Arispe grant ....T.D. 1,723 ft.; comp. 10,000,000 ft. gas.
O. W. Killam's No. 23 Bruni, 50 ft. from NW and SW lines of Blk. 34, Sec. 8 of Adams Subd. of Bruni lands in the Arispe Grant Sur. ....T.D. 3,039 ft.; plugged back to 2,490 ft.; abnd.

SARNOSA FIELD—DUVAL COUNTY

La Jita Oil Co.'s (Camp) No. 3 Weil, 1,691 ft. from SW line, 200 ft. from NW line of S half of Sur. 566....T.D. 2,100 ft.; drlg.
Sarnosa Oil Corp.'s No. 3 Weil, 120 ft. SE and 660 ft. NE of No. 2 in Sur. No. 130 ....T.D. 1,500 ft.; drlg.
Sarnosa Oil Corp.'s No. 4 Weil, 330 ft. NW and 660 ft. NE of No. 3 in Sur. No. 130 ....Location.
Smith & Capps' No. 4 Duval County Ranch Co., Sur. 576..T.D. 2,340 ft.; set csg., waiting on cement.
Sun Oil Co.'s No. 2 Cuellar (Cano), 150 ft. from SW and SE lines of E quarter of Sur. No. 576....Rigged up.

DARST CREEK POOL—GUADALUPE COUNTY

The Texas Co.'s No. 2 A. E. Dowdy, 660 ft. from W line, 400 ft. from S line of tract in Jacob Darst Sur..T.D. 1,654 ft.; drlg.

SAL-MAR FIELD—GUADALUPE COUNTY

Sal-Mar Oil & Gas Co.'s No. 1 Hempel, 1,600 ft. from S line, 150 ft. from E line of tract in G. W. Williams Sur. ....T.D. 2,177 ft.; standing.
A .W. Wormser's No. 1 Harris, 150 ft. from N line of tract and 150 ft. E of creek in Green Dewitt Sur.....Derrick.

HORD'S CREEK—GOLIAD COUNTY

Slick-Seeligson, Inc.'s No. 11 Kaufman, 660 ft. from SE line, 330 ft. from SW line of 4,265-ac. tract....Drlg. 4,498 ft.; abnd.

SLICK POOL—GOLIAD COUNTY

Slick-Seeligson's No. 2 Poetter, 330 ft. to SE and SW lines, 1,200 ft. SW of No. 1, Obid Marshall Sur. ....T.D. 4,300 ft.; abnd.

ALWORTH FIELD—JIM HOGG COUNTY

H. C. Cate's No. 1 B. J. Leyendecker, 70 ft. to E line, 320 ft. to S line, Blk. 10, Sur. 143 ....T.D. 600 ft.; drlg.

SANDIA POOL—JIM WELLS COUNTY

Hughes and Long's No. 1 Wade, cen. of Blk. 2 of Wade Ranch Subd. ....Changing rigs.
Larcro Gas & Pet. Co.'s No. 3 Wade, 2,000 ft. S, 33 deg. W of No. 2 Wade, thence 1,970 ft. N, 57 deg. W....Material on ground.

JACOB POOL—McMULLEN COUNTY

Jacob, Buzzini & Pickett's No. 8-A Jacob, 660 ft. N of No. 2-A Jacob ....Rigging up.
Jacob, Buzzini & Pickett's No. 9-A Jacob, 3,030 ft. from SW line, 843 ft. from SE line of Crowther Sur. No. 8..T.D. 900 ft.; drlg.
F. B. Lefevre's No. 1 Leonard Jacob, 8,107 ft. S, 51 deg. W of E cor. and 1,697 ft. N, 39 deg. W, of SE line of W. D. Benham Sur. ....T.D. 627 ft.; drlg.

WENTZ POOL—McMULLEN COUNTY

V. G. Schimmel's No. 1 Wolfe, 400 ft. from E line, 360 ft. from N line of Sur. 65 ....Set surface csg.

ADAMS FIELD—MEDINA COUNTY

Vantis Oil Co.'s No. 1-A Adams, 50 ft. from No. 1 ....T.D. 200 ft.; drlg.

SAXET FIELD—NUECES COUNTY

Capps and Smith's No. 1 Hutchins, 330 ft. from S and E lines of 80-ac. tract in George Frank Sur. No. 416.. Derrick.
Houston Oil Co.'s No. 1 Walton, 170 ft. from N line, 220 ft. from E line of 500-ac. tract ..... T.D. 4,285 ft.; drlg.
Gibson Oil Co.'s No. 1 Ran Morgan, 330 ft. from S and E lines of E 80 acres of Ran Morgan's 320 acres in B.S.&F. Sur. No. 405 ..... T.D. 505 ft.; set surface csg.
Gulf Coast Oil Co.'s No. 2 Bessie Elder, 300 ft. to S and E lines of Lot 29, Shepard Subd. of John Dunn Sur. No. 312 ..... T.D. 4,215 ft.; drlg.
Gulf Port Oil Co.'s No. 1 Isencee, 330 ft. to N and W lines of 300-ac. tract in C. Land Sur. ..... Location.
Gulf Port Oil Co.'s No. 3 Frank Bliss, 1,699 ft. to N line, 350 ft. to E line of 235-ac. tract in J. W. Stevens Sur. No. 406 ..... Location.
Gulf Port Oil Co.'s No. 2 Isencee, 330 ft. from N and E lines of 235-ac. tract in Charles Land Sur. No. 404. Derrick.
Saxet Oil Co.'s No. 9 Dunn, 180 ft. from N line, 164 ft. from W line of lease, south offset to Oso Drillers' No. 2 Roark ..... T.D. 489 ft.; set surface csg.
O. R. Seagraves' No. 1 Lagasse, 330 ft. from N and W lines of Blk. 22, of H. B. Shepherd farm lots..... Rigging up.
Titus & Calloway's No. 1 Lagasse, 2,200 ft. from N line, 2,400 ft. from E line of J. M. Stevens Sur. No. 406... T.D. 464 ft.; set surface csg.
Titus & Calloway's No. 2 Lagasse, 950 ft. from N line, 400 ft. from E line of J. M. Stevens Sur. No. 406.... T.D. 495 ft.; set surface csg.
Titus & Calloway's No. 3 Lagasse, 330 ft. from N and W lines of E half of Blk. 25 of Shepherd farm lots.. Derrick.
Titus & Calloway's No. 1 Hutchins, 500 ft. from N line, 1,500 ft. from W line of Blk. 19, Shepherd farm lots.. T.D. 487 ft.; set surface csg.
Titus & Calloway's No. 1 Ran Morgan, 330 ft. from N and E lines of W 80 acres of E 160 acres of N half of 423 acres of B.S.&F. Sur. No. 403 ..... Derrick.

LOS OLMOS POOL—STARR COUNTY

Boyd-Jones' No. 1 unknown heirs, 150 ft. from E and S lines of Share 3 of Porcion No. 75 ..... Location.
V. V. Combs' No. 1 Kelsey Bass, 150 ft. from N and W lines of NE NE of Sec. 6, Porcions 75, 76 and 77.... Location.
Frank Doyno's No. 1 Seabury, 450 ft. from S line, 815 ft. from E line of 80-ac. tract in Share 5, of W portion of Porcion 75 ..... T.D. 398 ft.; set csg.
J. E. Harper & Co.'s No. 1 E. Salinas, 150 ft. to S and E lines of 40-ac. tract in Share 16, Por. 75 ..... Rigging up.
Hornaday-Porter's No. 1 Kelsey Bass, 150 ft. from S and W lines of NW NE Sec. 7 of Subd. of Porcions 75, 76, 77, Jurisdiction of Camargo ..... T.D. 210 ft.; drlg.
Keck & Keane's No. 1 Kelsey Bass, 150 ft. from E line, 300 ft. from N line of W 10 acres of SE NW Sec. 6, Subd. of Porcions 75, 76, 77, Jurisdiction of Camargo.. Spudded in.
Keck & Keane's No. 2 Kelsey Bass, 150 ft. from N and W lines of NE NE Sec. 6 of Subd. of Porcions 75, 76, 77, Jurisdiction of Camargo ..... Location.
Los Olmos Oil & Gas Co.'s No. 27 Kelsey Bass, on S line, and 844 ft. from E line of Sec. 7 of Subd. of Porcions 75, 76, 77, Jurisdiction of Camargo..... T.D. 400 ft.; drlg.
Los Olmos Oil & Gas Co.'s No. 28 Kelsey Bass, 200 ft. from N line, 60 ft. from W line of NE SW Sec. 7, Subd. of Porcions 75, 76, 77, Jurisdiction of Camargo.. T.D. 400 ft.; drlg.
Los Olmos Oil & Gas Co.'s No. 29 Kelsey Bass, 60 ft. from E line, 600 ft. from N line of NE SW of Subd. or Porcions 75, 76, 77, Jurisdiction of Camargo..... T.D. 439 ft.; comp. 25 bbls.
R. A. Mitchell's No. 1 Kelsey Bass, 150 ft. from S and W lines of NW SE of Sur. 8, Subd. Porcions 75, 76, 77, Jurisdiction of Camargo ..... Location.
J. P. Moore and C. B. Van Matre's No. 1 Seabury et al, 150 ft. from E line, 750 ft. from S line of Share 5, Subd. of W part of Porcion 75 ..... T.D. 305 ft.; drlg.
Munday Bros.' No. 1 Seabury, 840 ft. from E line, 4,550 ft. from S line of Share 5, Subd. of W two-thirds of Porcion 75, Jurisdiction of Camargo ..... Rigging up.
C. L. Sinclair's No. 1 Kelsey Bass, 150 ft. from S and E lines of SW SW Sec. 5, Subd. of Porcions 75, 76, 77, Jurisdiction of Camargo ..... Drlg.
Tarver & Nance, Inc.'s No. 6 Kelsey Bass, 750 ft. from W line, 150 ft. from S line of SW SE of Sur. 7, Porcions 75, 76, 77 of Camargo Sur. ..... T.D. 487 ft.; abnd.
Tarver & Nance's No. 7 Kelsey Bass, 150 ft. from N and W lines of SW of SE of Sur. 7, Porcions 75, 76 and 77 ..... Spudded in.
Tollen, Floyd & Warner's No. 1 Seabury, 450 ft. from S line, 814 ft. from E line of 80-ac. tract in Share 5, W part of Porcion 75 ..... T.D. 389 ft.; set csg.

RIO GRANDE CITY POOL—STARR COUNTY

Allison & Doyle's No. 1 Salines, 150 ft. to N and E lines of Blk. 2, Share 15-B, Porcions 80 and 81, Camargo... T.D. 1,480 ft.; standing.
Mundy and others' No. 1 Salines, 190 ft. to S and W lines of Blk. 12, Share C-38, Porcions 80 and 81, Camargo ..... T.D. 600 ft.; drlg.
Meyers and McCaghren's No. 3 Frank Doyno, 796 ft. from S line, 720 ft. from W line of Blk. 4, Share 77-A, Subd. of Porcions 80 and 81, Jurisdiction of Camargo ..... Location.
S. S. Smith's No. 1 O'Meara in Share 76 in W half of Porcion 79, Jurisdiction of Camargo ..... T.D. 1,650 ft.; no report.

LAUREL POOL—WEBB COUNTY

Hamill & Hamill's No. 1 Sarah Lloyd et al, 150 ft. from S and E lines of SE of SW of Sur. No. 23 ..... Rigging up.
Montex Oil Co.'s No. 1 M. Vela, 479 ft. from N line, 490 ft. from W line of Blk. 4, Sur. No. 267 ..... T.D. 1,700 ft.; showing gas.

ESCOBAS POOL—ZAPATA COUNTY

Allied Oil & Gas Co.'s No. 12 Gutierrez, 3,663 ft. from SE lines, 750 ft. from NE lines of Share 4, Comitas grant ..... T.D. 100 ft.; standing.
F. M. Blair & Son's No. 1 Montemayor, 450 ft. from N line, 150 ft. from E line of Blk. 1, Sur. 63 ..... T.D. 1,723 ft.; reinstated; preparing to sidetrack.
The Texas Co.'s No. 14 Measles in Cerrito Blanco grant.. T.D. 1,205 ft.; set csg.
Trevino Oil Corp.'s No. 17-A I. G. Trevino, 150 ft. to NW lines, 1,617 ft. to SW lines, Blk. 5, Sur. 65 ..... T.D. 1,214 ft.; set csg.
John Ward's No. 1 M. Garza estate, 150 ft. from NW and NE lines of Blk. 31, Douglas Subd. of Zorro ranch, Comitas grant ..... Location.

MARTINEZ POOL—ZAPATA COUNTY

H. Muckelroy, Jr.'s No. 1 A. Trevino, 150 ft. from S and E lines of Blk. 10, Sur. No. 411 ..... T.D. 2,247 ft.; drlg.

Gulf Coast Fields and Wildcats

(Continued from Page 48)

Gulf Prod. Co.'s No. 2 Gubbels, Samuel Kennedy Sur. (location to come) ..... Comp. flowing 60 bbls. hourly, 3/8-in. choke 5,189 ft.
Humble O. & R. Co. and Gulf Prod. Co.'s No. 5 Meyers, J. Rabb Sur., 1,000 ft. W and 250 ft. N of SE cor. of Meyers 188-acre tract ..... **Derrick.**
Humble Oil & Ref. Co. and Gulf Prod. Co.'s No. 4 T. R. Booth, Samuel Kennedy Sur. (location to come) ..... Drlg. sandy lime 4,316 ft.
Humble Oil & Ref. Co. and Gulf Prod. Co.'s No. 6-A F. I. Booth, Samuel Kennedy Sur. ..... Comp. flowing 60 bbls. hourly, 3/8-in. choke 5,241 ft.
Humble Oil & Ref. Co. and Gulf Prod. Co.'s No. 7-A F. I. Booth, Samuel Kennedy Sur. ..... Spudded.
Humble Oil & Ref. Co. and Gulf Prod. Co.'s No. 3 Davis, Robt. Peebles Sur., 2,985 ft. from W line and 350 ft. from N line ..... Drlg. shale 6,384 ft.
Humble Oil & Ref. Co. and Gulf Prod. Co.'s No. 3-A George, J. Rabb Sur., 1,000 ft. from W line and 350 ft. from S line of tract ..... **Derrick.**
Humble Oil & Ref. Co. and Gulf Prod. Co.'s No. 5 Lockwood, John Rabb Sur., 300 ft. from N line and 1,000 ft. from W line of 380-ac. tract ..... Drlg. sandy shale 5,176 ft.
Humble Oil & Ref. Co. and Gulf Prod. Co.'s No. 6 Lockwood, 4,000 ft. E and 323 ft. N of SW cor. ..... Drlg. sticky shale 1,210 ft.
Humble Oil & Ref. Co. and Gulf Prod. Co.'s No. 9-A Lockwood & Sharp, J. Rabb Sur., due S offset Gulf and Humble's No. 4 Meyers ..... Drlg. sandy shale 4,965 ft.
Humble Oil & Ref. Co. and Gulf Prod. Co.'s No. 10-A Lockwood & Sharp, J. Rabb Sur. ..... No report.
Humble Oil & Ref. Co. and Gulf Prod. Co.'s No. 5-B Lockwood & Sharp, John Rabb Sur., 800 ft. W of No. 4 ..... Sandy shale 5,300 ft.
Humble Oil & Ref. Co. and Gulf Prod. Co.'s No. 6-B Lockwood & Sharp, John Rabb Sur., 800 ft. E of No. 4 ..... Drlg. shale 5,196 ft.
Humble O. & R. Co. and Gulf Prod. Co.'s No. 7-B Lockwood & Sharp, J. Rabb Sur. ..... Derrick.
Humble Oil & Ref. Co. and Gulf Prod. Co.'s No. 8-B Lockwood & Sharp, J. Rabb Sur., 1,000 ft. from N line and 500 ft. from E line of 938-acre "B" lease ... Derrick.
Humble Oil & Ref. Co. and Gulf Prod. Co.'s No. 1 R. A. and O. H. Wolters, Robt. Peebles Sur., 325 ft. S and 500 ft. W of NE cor. of 1,000-ac. tract ..... **Derrick.**
Humble Oil & Ref. Co.'s No. 1 Gubbels, Samuel Kennedy Sur., 750 ft. N and 775 ft. W of SE cor. of Mrs. Mary Gubbels 90.6 acres ..... Drlg. sticky shale 1,941 ft.
Naylor et al's No. 1 Whitmore, Samuel Kenedy Sur., 467 ft. N of S line in C E and W of Lot 7 (20 acres) .... Rig.
The Texas Company's No. 3 Wolters, Samuel Kennedy Sur., 750 ft. N of No. 2 and 300 ft. W of E line ..... Drlg. gumbo and lime 2,164 ft.

HIGH ISLAND—GALVESTON COUNTY

Yount Lee Oil Co.'s No. 31 Cade, N. Fitzsimmons Sur., midway between and in line with Nos. 21 and 29 Cade ..... Drlg. sand and shale 5,535 ft.
Yount Lee Oil Co.'s No. 2 Broussard & Orme, Martin Duman Sur., 300 ft. SE of No. 1 ..... Sticky shale 6,225 ft.
Yount Lee Oil Co.'s No. 32 Cade, N. Fitzsimmons Sur., 600 ft. due S of No. 30 ..... Drlg. hard sand 4,450 ft.
Yount Lee Oil Co.'s No. 1 Mathais fee, 150 ft. from S line and 192 ft. from E line of 23.44-acre tract in Sarah Reeves Subd., Martin Dunman Sur. ..... Drlg. sand and lime 2,431 ft.
Yount Lee Oil Co.'s No. 13 Smith, Martin Dunman Sur., 600 ft. W of No. 12 in line with Nos. 11 and 12..... Drlg. hard sand 2,720 ft.

MANVEL—BRAZORIA COUNTY

The Texas Company's No. 2 Ewing, 1,220 ft. southwesterly and 200 ft. northwesterly at right angles out of E cor. of Blk. E of Suburban Gardens Subd., Harvey N. Little Sur. ..... Sand showing oil 3,992-4,022 ft.; reaming to set screen.

ARIOLA—HARDIN COUNTY

Gulf Prod. Co.'s No. 1 Kirby, Ariola, 330 ft. out of SE cor. of 100-ac. tract, Ariola Sur. ..... Drlg. sand 5,240 ft.
Houston Oil Co.'s No. 1-Y Ariola fee, 5,610 ft. from W line and 5,610 ft. from N line of Ariola Sur. ..... Drlg. sandy shale 2,174 ft.
Houston Oil Co.'s No. 1-Z Ariola fee, 3,000 ft. from W line and 5,610 ft. from N line of Ariola Sur. ..... Drlg. water sand 3,742 ft.
Republic Prod. Co.'s No. 2 Ariola fee, Ariola Sur., 660 ft. due E of Gulf's No. 1-A Kirby ..... Drlg. shale 4,931 ft.
Republic Prod. Co.'s No. 3 Ariola fee, Ariola Sur., 660 ft. due S of Gulf's No. 1-A Kirby ..... Derrick.

BATSON—HARDIN COUNTY

W. C. Christian's No. 1 Buchanan, Josephine Milholme Sur., 800 ft. from W line and 110 ft. from S line of 4.15-acre tract ..... No report.

SARATOGA—HARDIN COUNTY

Rio Bravo Oil Co.'s No. 90 Jordit ..... Sand showing oil 932-64 ft.; cmtd. csg.
Rio Bravo Oil Co.'s No. 403-B "B" ..... Set 14 ft. of 7-in. screen 192 ft.; bailing.

SOUR LAKE—HARDIN COUNTY

Houston Prod. Co.'s No. 1 Merchant, Stephen Jackson Sur., 90 ft. from E line and 1,226 ft. from S line of lease ..... Cap rock 4,051 ft.; abnd.
Jackson Mineral Oil Co.'s No. 1 Lula Hebert, 50 ft. from N line and 72 ft. from E line of 2-acre tract, Lot 3, Stephen Jackson Sur. ..... Cap rock 2,885-92 ft.; standing.
M. M. Miller's No. 1 Libbie Oil Co., Stephen Jackson Sur., 1,380 ft. NW of Houston Prod. Co.'s No. 1 Merchant ..... Derrick.

HUMBLE—HARRIS COUNTY

J. D. Clay's No. 4 Bender, Robt. Dunman Sur., 215 ft. N of No. 3 ..... Comp. flowing 400 bbls. P.L. oil 1,122 ft.
Sun Oil Co.'s No. 28 Bender, W. B. Adams Sur., 350 ft. W of No. 27 ..... Drlg. rock 4,673 ft.
Sun Oil Co.'s No. 59 River, R. Dunman Sur., 74 ft. from E line and 1,441 ft. from S line of block ..... Standing 370 ft.
Sun Oil Co.'s No. 64 River, Robert Dunman Sur., 1,972 ft. N of S line and 284 ft. E of W line of River lease.. Set screen 1,237 ft.; comp. flowing 75 bbls. daily.
J. O. Williams' No. 1 Stockdick, James Strong Sur., 100 ft. out of SE cor. of 22-acre lease ..... Temp. abnd. 315 ft.
E. M. Wilson's No. 1 Wheeler & Pickens, Block 20, 40 ft. N of S line and 75 ft. E of W line of Blk. 20, J. B. Stevenson Sur. ..... No report.

MYKAWA—HARRIS COUNTY

Crown-Framer Oil Co.'s No. 3 Minnetex, 100 ft. from N line and 100 ft. from E line of W half of Block 251, Wm. Lovett Sur. ..... Sandy shale showing oil 4,845 ft; cmtd. csg. 4,800 ft.

PIERCE JUNCTION—HARRIS COUNTY

Rio Bravo Oil Co.'s No. 25-A Settegast, 625 ft. W and 525 ft. N of SE cor. "A" lease, Jas. Kopman Sur. No. 44 ..... Coring sandy shale 4,399 ft.
Rio Bravo Oil Co.'s No. 26-A Settegast, J. Kopman Sur., 1,210 ft. from N line and 750 ft. from E line of "A" lease ..... Drlg. sand and boulders 730 ft.
Rock Drlg. Co.'s No. 1 Hooks, Jas. Hamilton Sur. No. 52, 160 ft. S and 60 ft. E of Humble's No. 1 Hooks ... T.D. 4,390 ft.; drlg. sidetracked hole 4,050 ft.

FANNETT—JEFFERSON COUNTY

Gulf Prod. Co.'s No. 6 Burrell, Wm. Smith Sur., 1,610 ft. N and 300 ft. E of SW cor. of 232-acre tract .... Tested S.W. 4,082 ft.; pulling screen to deepen.
Lowrie & Young's No. 1 Junker, Wm. Smith Sur., 125 ft. N and 100 ft. E of Gulf Prod. Co.'s No. 1 Junker in 260-acre tract ..... Drlg. gumbo 1,876 ft.

ESPERSON—LIBERTY COUNTY

Cranfill-Reynolds Co.'s No. 7 Davis (D.D.), David L. Kokernut Sur. ..... **Rig up to deepen 6,302 ft.**
Cranfill & Reynolds' No. 5 Esperson (W.O.), M. Duncan Sur., 100 ft. N line and 300 ft. E line ..... D.S. stuck 6,844 ft.
Cranfill-Reynolds Co.'s No. 9 Moore's Bluff, M. Duncan Sur., 500 ft. S of N line of Moore's Bluff tract in line with No. 6 Davis and No. 6 Moore's Bluff ..... **Location**
Cranfill-Reynolds Co.'s No. 10 Moore's Bluff, M. Duncan Sur., 1,500 ft. from E line and 2,100 ft. from N line of 632-ac. tract ..... Drlg. shale 4,500 ft.

HULL—LIBERTY COUNTY

Aberoil Co., Inc.'s No. 1 fee, Jesse DeVore Sur., 700 ft. from E line and 64 ft. from N line ..... Temp. abnd. 42 ft.
D. & L. Prod. Co.'s No. 1 Pevito (W.O.), Jesse DeVore Sur., 34½ ft. from E line and 30 ft. from N line of 5-acre strip ..... T.D. 4,687 ft; W.O.

Carpenter & Parr's No. 2 Antilley, Jesse DeVore Sur., 821 ft. W and 250 ft. S of NE cor. of 20-acre lease..Rigging.
Empire G. & F. Co.'s No. 34 Barngrover, Jesse DeVore Sur., 75 ft. out of SW cor. of lease ..... No report.
W. B. Flynn's No. 1 Ray (W.O.), Jesse DeVore Sur. ....Drlg. sandy shale 2,076 ft.
Gulf Coast Dev. Co.'s No. 2 Finley, Jesse Devore Sur., 135 ft. W of No. 1 and 51 ft. S of N line of lease ...Drlg. 2,025 ft.
Gulf Prod. Co.'s No. 30 Phoenix (W.O.), Jesse DeVore Sur. .....Drlg. sand and shale 3,136 ft.
Fondren & Snowden's No. 1 Humble fee, Jesse DeVore Sur., 250 ft. from E line and 50 ft. from S line of Humble Oil & Ref. Co.'s Hooks-Carr fee 6 acres .... Rig up to pump 1,957 ft.
Hannah Oil Co.'s No. 1 Hannah, Jesse DeVore Sur., 100 ft. W of The Texas Co.'s No. 1 Hannah ..... No report.
Lynd & Rowe's No. 1 Noble & Lynd, Jesse DeVore Sur., 137 ft. out of SE cor. 5-acre tract .....Drlg. 300 ft.
Republic Prod. Co.'s No. 19 Dolbear (W.O.), Jesse DeVore Sur. .....Cmtd. csg. 3,005 ft.
Republic Prod. Co.'s No. 141 Dolbear (W.O.), Jesse DeVore Sur. .....Cmtd. csg. 3,301 ft.
Unique (Eclipse) Oil Co.'s No. 1 Knox-Nelson-Layton, Jesse Devore Sur., 30 ft. from N line and midway E and W of ½-acre tract .....Derrick.

NORTH DAYTON—LIBERTY COUNTY

Ferguson & Head's No. 1 Quintette, H.&T.C. Sur., 48 ft. E of W line and 674 ft. N of S line of 10-acre tract .....No report.

SOUTH LIBERTY—LIBERTY COUNTY

Mecom Oil Co.'s No. 1 Barrett, M. G. White Sur., 365 ft. from S line and 155 ft. from E line of lease .....No report.

CONROE—MONTGOMERY COUNTY

Alpha Pet. Co.'s No. 1 Keystone Mills, Lemuel Smith Sur., 466 ft. from N and E lines of 200-acre lease..Rig.
Gulf Coast Drlg. & Dev. Co.'s No. 1 South Texas Dev. Co., T.&N.O. Sur., 4,500 ft. E of No. 1 Keystone Mills..Derrick.
W. B. Hamilton et al's No. 1 Moorehead, J. McHorse Sur., 466 ft. from S line and 466 ft. from W line of Ezell & Hill Moorehead 40-acre tract .....Comp. flowing 500 bbls. daily 5,100 ft.
W. B. Hamilton's No. 2 Moorehead, L A Lang Sur., 466 ft. from N line in C E and W of 40-acre tract .....Rigging up.
Harrison & Abercrombie's No. 1 O. L. Alexander, John McHorse Sur., 530 ft. from W line and 350 ft. from N line of 100-acre tract .....Derrick.
Hooper-Rutherford Oil Co.'s No. 2 Hooper, L&G.N. Sur., Abst. 649, 708 ft. S of No. 1 in center of tract E and W .....Drlg. soft sand 4,999 ft.
Hooper-Rutherford Oil Co.'s No. 3 Hooper, L&G.N. Sur., Abst. 649, 782 ft. S of No. 2 in center of tract E and W .....Location.
Houston Oil Co. and Heep Oil Co.'s No. 1 Dobbins, Ransom House Sur., 466 ft. east of W line in center north and south of 100-ac. tract .....Reset screen 5,108 ft.; washing.
Humble Oil & Ref. Co.'s No. 2 Dobbins, Ransom House Sur., 1,400 ft. northeasterly along SE line of lease from SW cor. and 466 ft. northwesterly at right angles .....Comp. flowing 40 bbls. hourly 5,106 ft.
Humble O. & R. Co.'s No. 3 Dobbins, Ransom House, 700 ft. S from NW cor. lease and 460 ft. easterly at right angles .....Location.
Humble Oil & Ref. Co.'s No. 1 Hirsch, D. McIntyre Sur., 450 ft. E of W line in C N and S of 40-acre tract ..Spudded.
Humble Oil & Ref. Co.'s No. 2 Madeley, Ransom House Sur., 466 ft. southwesterly along southernmost SE line from SE cor. of tract and 466 ft. northwesterly at right angles .....Spudded.
Humble Oil & Ref. Co.'s No. 3 Madeley, 650 ft. E and 650 ft. S of SW cor. of M. W. Real Sur., in Ransom House Sur. .....Drlg. sticky shale 1,315 ft.
Humble Oil & Ref. Co.'s No. 4 Madeley, Ransom House Sur., 1,000 ft. N of No. 2 and 1,000 ft. W of No. 1...Derrick.
Humble O. & R. Co.'s No. 1 J. W. McDonald, John Davis Sur., 150 ft. S of N line of 56.55-acre tract, and direct offset James Papadakis' No. 1 McDonald..Derrick.
Humble Oil & Ref. Co.'s No. 2 McDonald, John Davis Sur., direct offset No. 1-B Cartwright .....Derrick.
Humble Oil & Ref. Co.'s No. 1 South Texas Dev. Co. (D.D.), 466 ft. westerly along N line of Theo. Slade Sur. from SW cor. A. McCown Sur., thence 750 ft. southerly at right angles .....Drlg. shale 5,176 ft.
Humble Oil & Ref. Co.'s No. 13 South Texas Dev. Co., 466 ft. S and 466 ft. W of SE cor. of A. M. Folks Sur. .....T.D. 5,215 ft.; plugged to 5,080 ft.; tested salt water; abnd.
Humble Oil & Ref. Co.'s No. 14 South Texas Dev. Co., 1,100 ft. N along NE line of T. C. Howell Sur. and thence 466 ft. westward at right angles .....Comp. flowing 108 bbls. an hour 5,184 ft.
Humble Oil & Ref. Co.'s No. 16 South Texas Dev. Co., Theo. Slade Sur., 667 ft. S of No. 10 and 677 ft. from E line of survey .....Comp. flowing 111 bbls. an hour 5,158 ft.
Humble Oil & Ref. Co.'s No. 17 South Texas Dev. Co., 466 ft. W of E line of Gulf Coast Drlg. & Dev. Co.'s "B" lease and 297 ft. S of N line of Theo. Slade Sur...Comp. flowing 77 bbls. an hour 5,165 ft.
Humble Oil & Ref. Co.'s No. 19 South Texas Dev. Co., 30 ft. N and 682 ft. W of SE cor. of T. C. Howell Sur..Drlg. gumbo 3,696 ft.
Humble Oil & Ref Co.'s No. 20 South Texas Dev. Co., 765 ft. S and 671 ft. W of NE cor. of Theo. Slade Sur. .....Sand 5,025 ft.; cmtd. csg.
Humble Oil & Ref. Co.'s No. 21 South Texas Dev. Co., T. C. Howell Sur., 933 ft. NE of No. 8 and 709.5 ft. NW of survey line .....Shale 936 ft.; cmtd. surface csg.
Humble Oil & Ref. Co.'s No. 22 South Texas Dev. Co., Theo Slade Sur., 333 ft. SW of SE cor. of Alex McCown Sur., thence 500 ft. S at right angles .....Drlg. shale 954 ft.
Humble Oil & Ref. Co.'s No. 23 South Texas Dev. Co., Theo. Slade Sur., 660 ft. N of No. 9 and 350 ft. E of E line of Gulf Coast Drlg. & Dev. Co.'s 60-acre tract..Shale 958 ft.; cmtd. csg.
Humble Oil & Ref. Co.'s No. 24 South Texas Dev. Co., Theo. Slade Sur., 1,520 ft. W and 765 ft. S of NE cor. of survey .....Derrick.
Humble O. & R. Co.'s No. 25 South Texas Dev. Co., Theo. Slade Sur., 849 ft. S of No. 21 .....Location.
Humble Oil & Ref. Co.'s No. 26 South Texas Dev. Co., 1,200 ft. S of SE cor. of Gulf Coast D. & D. Co.'s "B" lease .....Drlg. sandy shale 414 ft.
Humble Oil & Ref. Co.'s No. 27 South Texas Dev. Co., T.C. Howell Sur., 950 ft. NE of No. 23 and 950 ft. W of No. 14 .....Derrick.
Humble Oil & Ref. Co.'s No. 1-A Alexander, NE cor. of J. McHorse Sur. .....Drlg. shale and lime 4,682 ft.
Humble Oil & Ref. Co.'s No. 2-A Alexander, J. McHorse Sur., 350 ft. from the E line in the C N and S of 30-acre tract .....Derrick.
Humble Oil & Ref. Co.'s No. 1-B Alexander, John McHorse Sur., 599 ft. S and 363 ft. E of NW cor. of Alexander "B" lease .....Spudded.
Humble Oil & Ref. Co.'s No. 1-C Alexander, John McHorse Sur., 577 ft. from E line of survey in C N and S of 20-acre tract .....Derrick.
Humble O. & R. Co.'s No. 1-D Alexander, John McHorse Sur., 599 ft. S of N line of survey and midway E and W lines of 20-acre "D" lease .....Rigging up.
Humble O. & R. Co.'s No. 1-E Alexander, John McHorse Sur., 577 ft. E of W line of Sur., and midway N and S line of 50-acre "E" lease .....Derrick.
Humble Oil & Ref. Co.'s No. 6-A Cartwright, John Davis Sur., 671 ft. from W line and 376 ft. from S line of lease .....Sand showing oil 5,085 ft.
Humble Oil & Ref. Co.'s No. 7-A Cartwright, 350 ft. N of S line, due N offset Violet & Griffith's No. 1 Hooper .....Drlg. sticky shale 1,972 ft.
Humble Oil & Ref. Co.'s No. 1-B Cartwright, John Davis Sur., C of 20-acre "B" lease .....Rig.
Humble Oil & Ref. Co.'s No. 2 Plaefflin, W. N. Real Sur. 671 ft. from W line and 326 ft. from N line of 110-acre tract .....Drlg. sand and shale 5,042 ft.
Moore & Bruton's No. 2 Hooper, I.&G.N. Sur., Abst. 650, 466 ft. N of S line in C of tract E and W .....Drlg. rock 700 ft.
Navarro Oil Co.'s No. 1 Rhoden, Wilson Strickland Sur., 470 ft. from S line and 430 ft. from E line of 16-acre tract .....Drlg. shale and lime 3,955 ft.
James Papadakis' No. 1 Stella McDonald, John Davis Sur., 241½ ft. from E line, 202.8 ft. from S line of 5-acre tract .....Drlg. shale 4,838 ft.
Albert Plummer's No. 1 South Texas Dev. Co., E half of Blk. 43, Alex McCown Sur. .....Tested S.W. 5,190 ft.; abnd.
Showers & Moncrief's No. 1 R. R. Dunn, M. W. Real Sur., 100 ft. S of C of N 20 acres of Moncrief 30 acres .....Sand showing oil 5,101 ft.; cmtd. csg.
Southland Oil Co.'s No. 1 Cummings, Wilson Strickland Sur., 466 ft. out of NE cor. of 104-acre tract .....Drlg. sand and sandy shale 5,014 ft.
Standard Oil Co. of Kansas' No. 1 Alexander, John McHorse Sur., 330 ft. from N line and 363 ft. from W line of tract .....Drlg. rock 3,109 ft.
C. C. Steinberger's No. 1 South Texas Dev. Co., T.&N.O. Sur., Abst. 568, 540 ft. from S line in S E and W of 35-acre tract .....Derrick.
G. W. Strake's No. 1 Lewis, Chas. Stewart Sur., 1,400 ft. E of W line and 2,200 ft. N of S line .....hale 2,300 ft.; S.D.
The Texas Company's No. 1 Moody, 1,400 ft. easterly and 466 ft. southerly out of NW cor. of Moody 494-acre lease, Ranson House Sur. .....Drlg. 6⅝-in. plug 5,000 ft.
Violet & Griffith's No. 1 Mrs. Fannie Hooper, M. DeMoss Sur., 350 ft. S of N line of survey in C E and W ....Drlg. shale 2,860 ft.
Violet & Griffith's No. 6 Mrs. Fannie Hooper, M. DeMoss Sur., C of survey E and W, due offset Alpha's No. 1 Dunn .....Cmtd. 10-in. csg. 907 ft.

REFUGIO—REFUGIO COUNTY

Hewitt & Dougherty's No. 1 M. F. Lambert, Wm. Hews and L. Brown Sur., 4,350 ft. NE along NW line from SW cor. of United Prod. Corp.'s M. F. Lambert lease and thence 990 ft. SE at right angles .....Shale showing oil 6,518 ft.; cmtd. 6⅝-in. csg.

SOUTH LOUISIANA FIELDS

JENNINGS—ACADIA PARISH

Olympic Oil Co.'s No. 1 Luckett, 1,150 ft. S and 75 ft. W of NE cor. of Sec. 42-9s-2w .....Rig.
Yount Lee Oil Co.'s No. 11 Housierre-Latrielle, 1,010 ft. N and 5,050 ft. S of SW cor. of Sec. 47-9s-2w .....Drlg. 6,021 ft.

SORRENTO—ASCENSION PARISH

Union Sulphur Co.'s No. 22 United Land Co., 5,740 ft. N and 1,360 ft. W of SE cor., Sec. 15-10s-4e.....No report.

IOWA—CALCASIEU AND JEFF DAVIS PARISHES

Shell Pet. Corp.'s No. 2 Fontenot, 225 ft. E and 325 ft. N of SW cor. of Sec. 7-9s-6w .....Drlg. hard, brittle shale 6,916 ft.
Shell Pet. Corp.'s No. 3 Fontenot, Sec. 7-9s-6w, direct E offset Magnolia's No. 2 Waite .....Location.

EDGERLY—CALCASIEU PARISH

The Texas Company's No. 1 Miller Estate, 150 ft. E and 150 ft. S of NW cor. of NE of Sec. 27-9s-11w .....Drlg. shale 5,485 ft.

LOCKPORT—CALCASIEU PARISH

Lockport Oil Co.'s No. 1 Phoenix .....D.S. stuck 1,200 ft.; standing.
Magnolia Pet. Co.'s No. 6-A Farquahar, NW cor. of NE SE of Sec. 8-10s-9w .....Rig.

SULPHUR—CALCASIEU PARISH

Union Sulphur Co.'s No. 770 fee, 292 ft. S, 1,243 ft. W of center, Sec. 29-9s-10w .....Sand showing oil 4,669-79 ft.
Union Sulphur Co.'s No. 772 fee, 145 ft. S, 882 ft. W of center, Sec. 29-9s-10w .....Salt 3,968-5,009 ft.; plugged to 3,849 ft; sidetracked to sand 3,806 ft; set 22 ft. of 3½-in. screen.
Union Sulphur Co.'s No. 774 fee, 226 ft. W, 114 ft. S of center of Sec. 28-9s-10w.....Sand showing oil 3,347-56 ft.; cmtd. 9¼-in. csg. 3,336 ft.

VINTON—CALCASIEU PARISH

Marrs McLean's No. 14 Gray, Sec. 33-10s-12w, 88 ft. W and 30 ft. S of No. 4 .....Heaving shale 3,056 ft; cut 6-in. liner 1,758 ft; set 38 ft. of 6-in. screen 1,811 ft.; bailed dry.
Vinton Pet. Co.'s No. 5 Matilda Gray (D.D.), 456 ft. W, 362 ft. N, SE cor. SW NE, Sec. 33-10s-12w.....Heaving shale 3,880 ft.; abnd.
Wilson-Broach's No. 2 Wilson (W.O.), 280 ft. N and 126 ft. E of SW cor. SE NE of Sec. 33-10s-12w .....Set 18 ft. of 3-in. screen 3,205 ft; tested S.W.; temp. abnd.

GUEYDAN—VERMILLION PARISH

Pure Oil Co.'s No. 3 Alliance Trust Co., 699 ft. from N line and 1,460 ft. from W line of Sec. 34-11s-1w .....Drlg. shale 3,624 ft.
Pure Oil Co.'s No. 2 Mulvey, Sec. 34-11s-1w, 1,515 ft. from N line and 1,150 ft. from E line of tract .....Rigging up.

HACKBERRY—CAMERON PARISH

Calcasieu Oil Co.'s No. 38 Watkins, 991 ft. W and 1,200 ft. N of SE cor. of Sec. 13-12s-10w .....Drlg. 2,100 ft.
Wilfred Lahaye's No. 1 Olevia, Sec. 36-12s-10w, in 2-acre tract .....Spudded and shut down.
Lackawanna Oil Co.'s No. 1 Ellender, 320 ft. S and 150 ft. E of NW cor. of SE SE of Sec. 21-12s-10w .....Derrick.
Massert & Cruse's No. 1 J. B. Duhon, 656 ft. S and 325 ft. E of NW cor. of Sec. 26-12s-10w .....Derrick.
J. G. Sutton's No. 9 Irwin, 1,520 ft. N and 1,045 ft. W of SE cor. of Sec. 13-12s-10w .....Sand and shale 2,969 ft.; cmtd. 6⅝-in. 2,957 ft.
Union Sulphur Co.'s No. 4 Gulf Land-Humble lease, 710 ft. N and 330 ft. W of SE cor. of Sec. 11-12s-10w ...Drlg. sand and shale 1,650 ft.
Union Sulphur Co.'s No. 2 Gulf Land-Pure lease, 1,958 ft. N and 200 ft. W of SE cor. of Sec. 11-12s-10w ...Drlg. sand and shale 5,620 ft.
Yount Lee Oil Co.'s No. 11 School land, 3,810 ft. W and 1,608 ft. N, SE cor., Sec. 15-12s-10w .....No report.

CHOCTAW—IBERVILLE PARISH

Standard Oil Co.'s No. 3 Gay, 520 ft. S and 200 ft. E of C of Sec. 52-9s-11e .....Derrick.

WHITE CASTLE—IBERVILLE PARISH

Shell Pet. Corp.'s No. 6 Wilbert, Sec. 9-11s-12e, 200 ft. out from No. 5 .....Drlg. hard black sand 4,958 ft.

CAMERON MEADOWS—CAMERON PARISH

Magnolia Pet. Co.'s No. 3 Cameron Meadows, 3,620 ft. S and 1,900 ft. W of NE cor. of Sec. 21-14s-13w....Rig.

LEESVILLE—LA FOURCHE PARISH

The Texas Company's No. 5 L.L.&E., 3,888 ft. S and 105 ft. E of NW cor. of Sec. 36-21s-22e .....Salt 4,107-4,177 ft.; plugged to 4,027 ft.; abnd.

PORT BARRE—ST. LANDRY PARISH

Port Barre Oil Co.'s No. 1 Sibille (W.O.), Sec. 20-6n-5e, 600 ft. S and 124 ft. E. NW cor. of 30-ac. tr. ....Standing 3,572 ft.

STARKS—CALCASIEU PARISH

Emerson & Stark's No. 2 Industrial, 400 ft. S of No. 1, in SE cor. NE NW, Sec. 30-9s-12w.....No report.
Gulf Ref. Co.'s No. 31 Lutcher-Moore, Sec. 19-9s-12w, 500 ft. E of No. 15 .....Comp. flowing 1,400 bbls. P.L. oil, 390 lbs., ½-in. choke; sand 3,698 ft.

SWEET LAKE—CAMERON PARISH

Pure Oil Co.'s No. 11 Yount Lee, Sec. 12-13s-8w, 800 ft. S 66 deg. 42 min. from No. 9 ..... Drlg. hard, sandy lime 2,699 ft.

TEXAS

MISCELLANEOUS WILDCATS

AUSTIN COUNTY

Great Southern Oil Co.'s No. 1 Schevojea, 329 ft. N, 78° E of N cor. B. Dottery Sur. ..... S.D. 2,844 ft
Tibbett et al's No. 1 Lyndeman, E. M. Kuykendall Sur.... Location.

BRAZORIA COUNTY

Danciger O. & R. Co.'s No. 1 W. C. Hunt, Pledger, 5,220 ft. from the N line and 6,500 ft. from E line of W. Coirson Sur. ..... Sand showing oil 6,757-67 ft.; reaming to set csg.

John Deering's No. 1 C. W. Chapman, 294 ft. from S line and 104 ft. from E line of Lot 2, Andrew Robinson Sur. ..... Drlg. shale 5,626 ft.

Gulf Prod. Co.'s No. 1 American National, E. R. Bradley Sur. No. 13, 7,594 ft. E and 900 ft. N of SW cor. of 1,472-acre tract ..... Drlg. gumbo and lime 1,782 ft.

Gulf Prod. Co.'s No. 1-B H. P. Lockwood, Wiley Martin Sur. No. 9, 3,024 varas S, 45° W along SE line of Lockwood 536-acre tract from E cor., thence 241 varas NW at right angles from said line ..... Drlg. gumbo 3,565 ft.

A. D. Parsons et al's No. 1 Hughes, 1,500 varas, NE from W cor. along NW line of A. L. D. Lewis Sur., and 200 varas SE at right angles in Hughes 320-acre tract ..... Drlg. hard shale 2,750 ft.

Shell Pet. Corp.'s No. 5 Blakely-Winston, Danbury, 1,410 ft. N 63° and 1,200 ft. N 27° W of SW cor. of H.T.&B. Sur. No. 14 ..... Drlg. gummy shale 4,817 ft.

Tri-fin Oil Co.'s No. 1 Moers, 1,635 ft. southwest of Chocolate Bayou and 693 ft. SE of NW line of F. Moore Sur. ..... Drlg. gumbo 2,237 ft.

BURLESON COUNTY

Ball & Knob's No. 1 Polansky, M. B. Lawrence Sur., 359 ft. from E line and 469 ft. from N line of 158-ac. tr. ..... **No report.**

E. M. Bracey et al's No. 1 Bracey, J. Lastly Sur., 880 ft. from E cor. of P. Taylor 110 acres, SE along NE line of J. G. Houston 189 acres, thence 180 ft. at right angles in 3-acre tract ..... S.D. 2,340 ft.

Sampson Oil & Gas Co.'s No. 3 Duckworth & Gilley, P. Singleton Sur., 50 ft. SE of No. 1 ..... No report.

J. E. Stubblefield et al's No. 1 Mitchell, A. T. Woolridge Sur., 81 ft. SW and 4,340 ft. SE of S cor. of Joseph Henson Sur. ..... **Gumbo 600 ft.; standing.**

COLORADO COUNTY

Smith, Adair et al's No. 1 Barnett, 230 ft. from W line and 330 ft. from S line of Blk. 26, Q. K. Winn Sur. Drlg. shale 5,112 ft.

FORT BEND COUNTY

Lowrie & Young's No. 1 Jackson Brown, Pilant Lake, Wm. Barrett & Abner Harris Sur., 150 ft. out of SW cor. of Brown 1,000-acre tract ..... Derrick.

Lynch et al's No. 1 Kneitz, 690 ft. from NW line and 350 ft. from SW line of Sec. 43, H.&T.C. Sur. ..... Shut down for repairs 672 ft.

Magnolia Pet. Co.'s No. 1 Hampil, H. Christman Sur., 1,342 ft. N and 285 ft. W from SW cor. of J. W. Slavin 28 acres ..... Drlg. shale 5,609 ft.

Naylor & DeCosta's No. 1 Naylor, 6,350 ft. N, 55 deg. E from SW cor. 453-acre tract in Christman Sur. ... No report.

North Star Pet. Co.'s No. 1 Guyler, Andrew Roberts Sur., 330 ft. out of SW cor. of 100-acre tract ..... Sandy shale 5,204 ft.; S.D. waiting orders.

Paul & Gerke's No 1 Krenek, Gale Borden Sur., 150 ft. out of NW cor. of tract ..... **Derrick.**

Reisinger et al's No. 1 Joe Sitter, Long Point, T. J. Bell Sur., 150 ft. SW and 150 ft. SE of N cor. of 80-acre tract ..... Tested S.W.; sand 928-40 ft.; pulling screen.

GALVESTON COUNTY

Humble Oil & Ref. Co.'s No. 1 Rosenkranz, Green's Bayou, center N half of Lot 10, Sarah White Sur..... Drlg. shale 6,820 ft.

GRIMES COUNTY

Barnett et al's No. 1 Dodd, Timothy Jones Sur. ..... T.D. 2,689 ft; 6⅝-in. csg. 2,660 ft; bailed csg. and swbd. S.W.; standing.

W. J. Brightwell's No. 1 Combs, Samuel Beauman Sur., 350 ft. from S line and 622 ft. E of extreme W line of 276-acre tract ..... Drlg. sticky shale 4,604 ft.

Petroleum Southwestern Corp.'s No. 1 Greer Bros., Pat B. O'Connor Sur., 450 ft. S and 200 ft. E of SW cor. of 63-acre tract ..... **Derrick.**

HARDIN COUNTY

Chas. Paggi's No. 1 Hooks, 200 ft. out of NW cor. of Wm. Slade Sur. ..... S.D. 1,650 ft.

Joe E. Proctor's No. 1 Russell & Teagle, 3,650 ft. E and 2,777 ft. N of NW cor. of Wm. W. Young Sur...... Drlg. shale 3,112 ft.

Republic Prod. Co.'s No. 1 Ben Andrews fee, 1,140 ft. W of Neches River and 345 ft. N at right angles in Van Meter Sur. ..... Drlg. sand and shale 5,042 ft.

HARRIS COUNTY

T. V. Buckholve & Sons' No. 1 Miller, Arthur McCormick Sur. ..... S.D. 1,310 ft.

Cherry & Pritchard's No. 1 Dr. Griffith, S. Bell Sur., 582 ft. from E line and 60 ft. from N line of 250-acre tract ..... T.D. 756 ft.; cmtd. 10-in. csg. 40 ft.

John Deering's No. 1 Warren, Hockley T. Snell Sur., 100 ft. due south of The Texas Co.'s No. 3 Warren.. S.D. 2,411 ft.

Indian Hill Oil Co.'s No. 1 Schlveinle, Wm. White Sur., 990 ft. S 80° W of NW cor. of Lienberger 20-ac. tract in Blk. 1 ..... Broken sand and shale showing gas 5,631 ft.; standing.

JASPER COUNTY

Gulf Prod. Co.'s No. 1 Miller Vidor, 2,893 ft. S and 112 ft. E of NW cor. of Sarah Gray Sur. ..... Drlg. sand 5,242 ft.

Houston Oil Co.'s No. 1 Richardson fee, 2,000 ft. S and 3,003 ft. W of NE cor. of Ben Richardson Sur. ..... Drlg. sandy shale 3,931 ft.

Smitherman, Neilson & Noble's No. 1 Cameron, SE cor. of Cameron Lbr. Co. tract, Wm. Jones Sur. ..... Moving in.

JEFFERSON COUNTY

Coastal Oil Co.'s No. 1 Young, 250 ft. from E line and 160 ft. from S line of 40-acre tract in Blk. F-5, Lot 6, Joseph Grigsby Sur. ..... Drlg. shale 3,212 ft.

Blum & Pipkin's No. 2 Broussard, John McGaffey Sur., 150 ft. due E of No. 1 ..... **Shut down 1,855 ft**

Jack Schultz' No. 2 Todd, Cheek, 1,800 ft. S of No. 1 and 130 ft. E of W line of Wm. Carr Sur. ..... Drlg. lime and shale 5,798 ft.

LIBERTY COUNTY

Leon Brisley's No. 1 J. M. Neal, Edward Tanner Sur., 1,800 ft. E, 1,300 ft. N of most westerly NW cor. of Margaret Evans Sur. ..... Drlg. shale 2,753 ft.

Mayes et al's No. 1 Dunman, J. C. Martin Sur., 1,111 ft. from S line of survey and 2,360 ft. W of Trinity River ..... **Rig.**

MATAGORDA COUNTY

Cockburn Oil Corp.'s No. 5 Hawkins, Shepherds Mott, 2,200 ft. SE and 1,800 ft. NE of W corner of Daniel McCarthy Sur. ..... Rig.

Danciger O. & R. Co.'s No. 1 Turner, 4,900 ft. from NE line and 3,800 ft. from SE line of M. Cummings Sur. ..... **Surface clay 30 ft.; derrick down**

Dr. Griffith et al's No. 3 Baer, Big Hill, 5,000 ft. N, 1,000 ft. E from SW cor. of Seth Ingram Sur. ..... **Standing 2,730 ft.**

Humble Oil & Ref. Co.'s No. 1 Pierce Est., Isaac Foster Sur., 330 ft. from N line and 330 ft. from E line of tract ..... **Rig.**

Rugeley et al's No. 1 Cleveland, E. Hall Sur., 450 ft. E of Cottonwood Creek and 200 ft. N of S line of 80-acre tract ..... No report.

MONTGOMERY COUNTY

Miller Prod. Co.'s No. 1 Foster Lbr. Co., M. B. Lawrence Sur., 2,640 ft. from N line and 300 ft. from E line of 412-acre tract ..... Drlg. shale 4,463 ft.

A. H. Parsons et al's No. 2 Drought, Kronkite Sur., 3,000 ft. N and 100 ft. E of NW cor. of A. B. Hill 46½ acres ..... **Rig.**

Rheubotham et al's No. 1 A. H. Salls, Wm. Barker Sur., 390 ft. from E line and 400 ft. from N line of W 36 acres of Salls tract ..... Spudded and S.D.

Sutton-Hawkins' No. 1 Foster, Rosea de la Garza Sur., 3,333 ft. N and 1,320 ft. E of NE cor. of W. J. Johnson 100-ac. tract ..... Standing 3,868 ft.; (cor. depth).

NEWTON COUNTY

L. A. James et al's No. 1 Price, T.&N.O. Sur., 1,000 ft. from W line and 500 ft. from N line of tract ..... S.D. 1,980 ft.

Sun Oil Co.'s No. 1 Peevey Moore Lbr. Co., 2,145 ft. from S line and 1,225 ft. from W line of F. Stoevar Sur. No. 4 ..... Drlg. gumbo 6,835 ft.

ORANGE COUNTY

Republic Prod. Co. and Houston Oil Co.'s No. 1 Hurst fee, 2,000 ft. W and 2,200 ft. N of SE cor. of Ed Hurst Sur. No. 15 ..... Drlg. sticky shale 1,896 ft.

E. L. Smith Oil Co.'s No. 1 Miller-Vidor, 750 ft. E and 200 ft. N of SW cor. of J. M. Swisher Sur. No. 3.... Drlg. sandy shale 2,315 ft.

POLK COUNTY

Anderson et al's No. 1 Duke, Peter J. Manard Sur., 330 ft. out of NW cor. of 235-acre tract ..... **Cmtd. 10-in. csg. 755 ft.; standing.**

Koch & Stevens' No. 1 Ruth Lawrence, Castillian Sur., 300 ft. from W line and 790 ft. from S line of 54-acre tract ..... Standing 2,410 ft.

Pony & Purdy's No. 1 Martha Roberts, Joaquin T. De Rumayor Sur. ..... T.D. 3,656 ft.; recemented surface csg.

Dick Schwabb and Shell Pet. Corp.'s No. 1 Davis & Holmes, A. Viesca Sur., approx. 1,050 ft. W and little S of Dick Schwabb's No. 1 Carlton & Davis.... Rigging up.

REFUGIO COUNTY

Humble Oil & Ref. Co.'s No. 3 O'Connor, Florentine Rice Sur., 13,757 ft. from S line at right angles and 3,412 ft. from E line at right angles of 5,545-acre ranch ..... Drlg. sticky shale 3,008 ft.

SAN JACINTO COUNTY

Weaver et al's No. 1 Delta Land & Timber Co., 1,400 ft. NE of SW line of James W. Robertson Sur., and 800 ft. at right angles ..... **Derrick.**

TRINITY COUNTY

C. M. Beckner's No. 1 Gibson, Wm. Beasley Sur., 600 ft. S along E line of survey and 150 ft. W at right angles ..... Drlg. shale 949 ft.

TYLER COUNTY

Republic Prod. Co. and Houston Oil Co.'s No. 1 Sam Jeffcoat, E. Thompson Sur., 467 ft. N and E from SW cor. of 100-acre tract ..... Location.

Republic Prod. Co. and Houston Oil Co.'s No. 1 Kirby, E. Thompson Sur., 467 ft. N and E from NE cor. of Sam Jeffcoat 100 acres ..... Derrick.

Republic Prod. Co. and Houston Oil Co.'s No. 1 Sterne fee (W.O.), 8,384 ft. from W line and 484 ft. from N line of Adolphe Sterne Sur. ..... Pulled screen to deepen 4,708 ft.

VICTORIA COUNTY

Gulf Prod. Co.'s No. 3 Keeran Ranch, Martin DeLeon Sur., 1,320 ft. NW of No. 1 ..... Rig.

Houston Oil Co. and Magnolia Pet. Co.'s No. 1 Beck, I.R.R. Sur. No. 26, 1,000 ft. NE along NW line from most westerly west cor. of Lot D and 600 ft. SE at right angles ..... Drlg. sticky shale 2,923 ft.

Humble Oil & Ref. Co.'s No. 1 Pete Rydolph, John Kemper Sur., 2,617 ft. from E line and 1,013 ft. from W line of lease ..... Abnd. 6,962 ft.

Slick-Seeligson Corp.'s No. 2 McFaddin (D.D.), J. Varian Sur., 1,100 ft. NE of SW line and 635 ft. E of railroad ..... Drlg. 6,005 ft.

The Texas Company's No. 5 McFaddin, 1,300 ft. westerly and 300 ft. northerly at right angles from SE cor. of J. A. McFaddin 98-acre Sur. ..... Rig.

Union Oil Co.'s No. 2 Keeran, Martin DeLeon Sur., 500 ft. E of E line of Gulf lease and 1,900 ft. N of railroad ..... Drlg. gumbo 2,712 ft.

WALLER COUNTY

Birdwell et al's No. 1 Robertson, John Baker Sur., 1,625 ft. from S line and 450 ft. from W line of 64-acre tract ..... **Derrick.**

Hobson et al's No. 1 Joe W. Harris, 3,000 ft. from E line and 5,000 ft. from N line of H.&T.C. Sur. in Harris 1,475-acre lease in Justo Liendo Sur. ..... Drlg. shale 4,611 ft.

WASHINGTON COUNTY

M.O.&T. Corp.'s No. 1 Giddings, S. Young Sur., 200 ft. from S line and 150 ft. from W line of 698-acre tract ..... **Shut down 65 ft.**

WHARTON COUNTY

Cullen & West's No. 1 Hawes, G. W. Singleton Sur., 580 ft. NE and 320 ft. SE of W cor. of Hawes' 148-acre tract ..... Cmtd. 13⅜-in. csg. 662 ft.

Cullen & West's No. 1 J. D. Hudgins, Alexander Jackson Sur., 330 ft. out of S or SE cor. of J. D. Hudgins' 319-acre tract ..... Cmtd. 13⅜-in. csg. 571 ft.

Bantt et al's No. 1 Laura Hahn, N. Manch Sur., 330 ft. out of NE cor. 142.17-ac. tract ..... Drlg. shale 5,010 ft.

Smith & Daniels' No. 1 Mitchell, H.&T.C. Sur. No. 8, 330 from NE line of NE 80-acre tract in C of tract NW and SE ..... Coring sandy shale 5,004 ft.

Steed Prod. Co.'s No. 1 Tucker, 210 ft. W and 50 ft. N of NE cor. of S½ of SW¼ of Sec. 58, E.T.R.R. Sur. ..... **Derrick.**

SOUTH LOUISIANA

BEAUREGARD PARISH

DeRidder Dev. Co.'s No. 1 McMahon, 200 ft. W and 156 ft. S of NE cor. of NW of Sec. 33-2s-9w ..... Standing 1,286 ft.

CALCASIEU PARISH

Cannon & Hughes' No. 1 J. S. Reed, Sec. 18-10s-12w... Derrick.

I. R. Irvine et al's No. 1 A. D. Mimms, 741 ft. N and 741 ft. W of SE cor. SE NE, Sec. 20-9s-7w..... S.D. 1,225 ft.

JEFFERSON DAVIS PARISH

B. D. Finly's No. 1 Clarphy Lognion, SW NW of Sec. 22-10n-4w ..... Spudded and S.D.

PLAQUEMINES PARISH

The Texas Co.'s No. 6 Garden Island Bay, 1,848 ft. S and 2,497 ft. W of NE cor. of Sec. 107-23s-32e ..... Location.

TERREBONNE PARISH

The Texas Co.'s No. 7 Caillou Island, 300 ft. S and 300 ft. W of NE cor. of Sec. 19-23s-20e ..... Location.

The Texas Company's No. 17 State-Lake Barre, 1,476 ft. W and 626 ft. S of NW cor. of Sec. 20-21s-20e ..... Salt 2,979-4,436 ft.

The Texas Company's No. 4 Lake Barre-L.L.&E., 3,803 ft. S and 2,075 ft. W of NW cor. of Sec. 30-21s-20e in Sec. 36-21s-19e ..... Spudded.

VERMILLION PARISH

Shell Pet. Corp.'s No. 1 Hebert, 2,310 ft. W and 330 ft. N of SE cor. of Sec. 10-15s-1e ..... Location.

VERNON PARISH

Minerals Division Llano Co.'s No. 1 Llano Del Rio, 543 ft. E and 300 ft. S of NW cor. of NW of Sec. 34-3n-9w ..... No report.

TECHNICAL QUESTIONS ANSWERED

By Charles K. Francis, Ph. D., Technical Editor

This department of The Oil and Gas Journal is devoted to the manufacturing branches of the oil industry.

Those connected with the refining of crude petroleum, the manufacture of natural gasoline and closely allied industries are invited to submit their problems to Dr. C. K. Francis, technical editor. The department was created for the purpose of aiding managers, superintendents, engineers, chemists and all those engaged in the various phases of plant operation; also those connected with marketing and utilization of petroleum products.

Questions should be submitted in as much detail as possible so as to assure a satisfactory answer.

All inquiries should be signed and if other than the given initials are to be used please indicate the desired letters.

Questions involving patented processes, intricate formulas, and calculations and estimates of costs, for obvious reasons, cannot be answered. The replies will appear on this page within a reasonable time.

Action of Gum Inhibitors Is to Retard Chemical Reactions

Please give me the action of gum inhibitor in gasoline, that is the chemical action. Does pyrogallol react with oxygen and retard gum formation, or does it really make the gasoline more stable by a chemical combination? Does the inhibitor have any bad effect on a motor?—R. A. E.

The reasons for the influence of the various substances in preventing or retarding a chemical reaction are not known. Inhibitors may behave along lines similar to the true catalysts; that is, they need not enter into the reaction, but simply act by their presence, just an influence. While a catalyst serves to accelerate a chemical change, an inhibitor acts to slow it down, or, in some cases, stop it altogether.

It appears that the conditions favorable for the development of color in petroleum products very often also hasten gum formation. These are air, light, heat and time. There are indications that oxygen will help to form the gum but this does not held in every case. The general opinion is that oxidation in some form, in the broad chemical sense of the term, is responsible for the formation of both color and gum in gasoline.

Egloff, Faragher and Morrell, in the article, Stabilizing Knock Rating, Gum, Color, in The Oil and Gas Journal, December 5, 1929, state: "Moureu and Dufraise (Chem. Rev. 3, July, 1926), have made an extensive study of the effect of antioxidants in preventing the oxidation of sensitive materials such as furfural, acrolein, styrol, linseed oil, which ordinarily under oxidizing conditions would develop color or form gum-like substances. These authorities have found that a mere trace of pyrogallol will prevent the oxidation of acrylic aldehyde, for example, even in an atmosphere of oxygen."

So far as we are informed, the better color and gum inhibitors that are now used are without action on the motor. It should be noted that the gum inhibitors used in gasoline make up a very minute part of the liquid, usually a pound or so in a tank car. They are decomposed with the fuel so there is little chance of enough residue remaining from this small quantity to do any harm. If too large a quantity of the inhibitor is used it may aid gum formation in place of preventing it.

Use of Kerosene in Radiator May Be Dangerous Practice

I certainly should appreciate it if you would be so kind as to advise what effect the use of kerosene in the radiator of a car would have upon the radiator, the cooling system, etc. There are arguments that it would ruin the radiator and others that it would have no effect at all, so your opinion is desired.—W. H. P.

The fully refined kerosene does not contain anything which will damage the radiator or the engine block. The several grades of kerosene found on the market vary to a considerable extent as to specific composition but the general properties are quite similar. Since kerosene is separated from crude oil and petroleum distillates immediately after the gasoline fraction it is to be expected that small quantities of gasoline should be found in kerosene; in fact, kerosene may contain from 10 per cent to nearly 40 per cent of the hydrocarbons that are included within the distilling range of gasoline. Most of the states recognize this condition as evidenced by the laws preventing the sale of kerosene having a dangerously low flashpoint, the minimum being from 110° to 120° F.

The common method in use at the refineries for the final purification of kerosene includes an alkaline wash which sometimes results in the formation of oil soluble salts or soaps. These may be complex compounds containing sodium, magnesium or calcium which will be deposited as a residue when the oil is evaporated or burned. In addition to these there is the possibility of the formation of gummy deposits from some grades of kerosene when the oil is held for some time at a high temperature, as in a radiator, or is slowly evaporated in contact with air.

Another feature to be considered is the action of kerosene on rubber. There is a tendency to soften the hose connections resulting in leaks. The possible low flashpoint and combustible character of the liquid suggests a dangerous condition that may result in the destruction of a car by fire when kerosene is used as a cooling liquid. This factor seems to be of more importance than the deposits which have been mentioned.

Oil Recovery Methods Should Follow Refinery Practice

Would you advise me as to the proper method of settling sludge from used motor oil? What is the amount of caustic soda per gallon? Will acid cut down the recovery?—B. H. N.

The treatment of used motor oil, the drainings from the crankcase, must involve the same principles that are applied in the refinery for the manufacture of lubricating oil from petroleum. The only exception is that having to do with wax removal because it is presumed that this has been reduced to meet the commercial standards in the original treatment.

The oil in the crankcase of an automobile is in much worse condition chemically than the raw lubricating oil fraction from the crude oil as it is not only diluted with light oils but there is contamination with all sorts of road dust, acid from the decomposition of the fuel and oil, traces of metal and water. Any treatment having for its object the recovery of the good oil in order to be adequate must include washing with an alkaline substance, such as caustic soda solution, settling and filtering to remove solid particles, removal of the light oils by distillation, acid treatment to remove tar and sulphur bodies, neutralization and filtration. These need not follow in the order here mentioned and each step should be under scientific control if the product is to equal the original oil and give satisfactory performance. No arbitrary method will do, so the quantities of acid and caustic soda to be used must vary with the condition of the oil. It is reported that the recovery of oil from crankcase drainings is usually not a profitable business because high quality lubricating oils are obtainable from the refineries at so low a price. There may be an exception to this when the truck owners reclaims the oil from his own fleet and does not need to bear the expense of collecting and reselling the oil.

Octane Ratings and Other Properties Paraffin Hydrocarbons

We are very anxious to have the Reid vapor pressure at 100° F., boiling point, gravity and octane rating of the lower paraffin hydrocarbons and benzene.—A. F. W.

The properties of the hydrocarbons are shown in the table.

Hydrocarbon—	A.P.I. grav.	Boiling point (° F.)	Vapor pres. @ 100° F. (lbs.)	Octane No.
Propane	146.3	—44.0	172	(*)
Iso-butane	119.1	10.9	59	100
Butane	110.6	30.9	37.5	92
Iso-pentane	90.8	82.3	5.8	91
Pentane	92.7	97.0	0.9	64
Iso-hexane	83.0	140.0	(†)	‡60
Hexane	81.6	156.1	(†)	‡30
Heptane	74.4	205/206	(†)	0
Iso-octane	73.1	205/208	(†)	100
Benzene	(Unfinished product with indefinite properties)			
Benzene	28.2/28.9	176	(†)	200

*Knocks at 10-1 C.R. †Vapor pressure nil, B.P. above 100° F. ‡Estimated.

The octane numbers of the hydrocarbons lighter than hexane are from the table of R. C. Alden, The Oil and Gas Journal, January 21, 1932, page 22. Mr. Alden gives another table, in the same article, showing a relation between octane numbers and Reid vapor pressures, as follows:

OCTANE NUMBER AND REID VAPOR PRESSURE

R.V.P.	Octane No.	R.V.P.	Octane No.
30	80.0	18	73.3
26	78.4	14	69.6
22	76.2	10	64.6

It is possible to estimate from these data the approximate octane number of any gasoline when the composition is known.

Cost of Making Motor Fuel from Corn and Potatoes Too High

To what extent will it be possible to develop the hydrogenation refining process along the line of processing corn and potatoes into a motor fuel substitute?—O. E. T.

The hydrogenation process, as applied to petroleum, is an improvement on the cracking operation now widely used for the manufacture of synthetic gasoline. Some bodies lacking in hydrogen are formed in the cracking process and carbon is also set free. If sufficient hydrogen were present the unsaturated bodies (lacking hydrogen) would not be produced and there could be no free carbon. The hydrogenation process supplies this needed hydrogen, the final result being a large yield of gasoline.

The hydrogenation of petroleum oils is conducted at high temperatures and pressures in expensive apparatus which requires technical skill and knowledge of a high order. A process of this type is not adapted to the manufacture of motor fuel from agricultural products such as potatoes and corn.

The most promising motor fuel to be obtained from corn or potatoes is alcohol. The process being based on fermentation and distillation. Alcohol is used for motor fuel in some countries, usually blended with gasoline, but the manufacturing cost in the United States is, at the present time, about four to five times that of gasoline. Even at the low prevailing market prices, corn and potatoes are too expensive to serve as raw materials for making a liquid to replace gasoline. They are required for manufacturing numerous articles (starch, sugar, gum, etc.) that are in demand as foods and utilized in the arts at prices far above the price charged for gasoline.

Most Lubricating Oil Is Made in East Coast Refineries

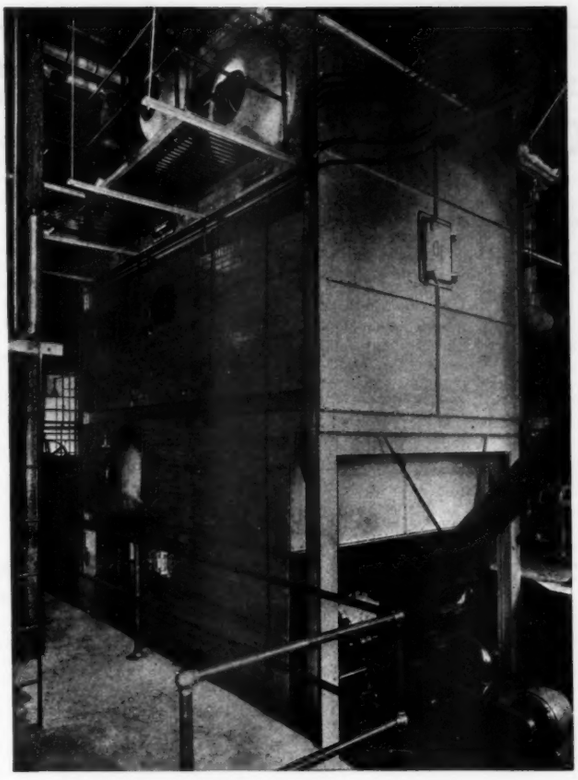
Can you give me the production of lubricating oil, in barrels, by the eastern refineries of the United States as compared with refineries in the Mid-Continent? Where is most of the lubricating oil made?—M. C. E.

The latest information showing the quantity of lubricating oil made in the several districts of the United States is furnished by the Western Petroleum Refiners Association, September 13, 1932. The data include the production of lubricating oil for 1932 as follows:

Lubricating Oil Made at Refineries First Seven Months, 1932

District—	Bbls.
East Coast	4,200,000
Appalachian	2,538,000
Indiana, Illinois, Kentucky, etc	1,323,000
Oklahoma, Kansas, Missouri	1,516,000
Inland Texas	147,000
North Louisiana and Arkansas	107,000
Texas Coast	3,085,000
Louisiana Coast	153,000
Rocky Mountain	162,000
California	985,000
Total United States	14,216,000

According to this authority, the refineries of the eastern district produced 8,061,000 bbls. of lubricating oil during the first seven months of this year. for the same period the Mid-Continent district made 1,770,000 bbls. It appears that the refineries located in the East produce more lubricating oil than all other refineries in the United States, with the larger part being made in the East Coast plants.



340 H. P. Boiler with Homoweld drums at the Falls City Ice & Beverage Co., Louisville, Ky.

These are *Real* Savings!

Burning 32.3% less coal in April and May of 1932 as compared to that used by two obsolete boilers, which it replaced, for the same months of 1931 is just one of the savings made by this Vogt unit at the Falls City Ice and Beverage Company, Louisville, Ky.

A 9.5% increase in power and refrigeration plant output was realized at the same time! This was represented by the generation of 2580 additional K. W. hours and the production of 557 more tons of refrigeration.

You too will profit by replacing your obsolete boilers with modern steam generating units.

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Water Tube Boilers

NATURAL GAS DEVELOPMENTS

Franchise Applications To Be Made in Michigan

MOUNT PLEASANT, Mich., No. 7.—Applications for gas franchises are being made or will be made to a number of villages and cities south of Mount Pleasant and if secured the seekers of the franchises will go before the Public Utilities Commission for a gas line franchise from the Central Michigan Field south to the cities they will serve, according to the Isabella County Times-News.

Lee S. Miller, a trustee for a corporation to be set up later, with his associate, J. P. McCloskey, gas engineer, expect to go before the village council of Shepherd at its next regular meeting to seek a franchise. Other franchises will be sought in St. Louis, Alma, Breckenridge, Ithaca and possibly other towns in that district. It is understood that the representatives of the prospective corporation have satisfied themselves that their gas supply will be available from the Broomfield Pool. Whether any actual contracts with producers have been made is not known.

Mr. McCloskey was at the head of the engineering work and surveying done in the Central Michigan Field by the Peninsular Construction Co., of Detroit, which originally applied to the State Utilities Commission for a permit to build a gas line from the Central Michigan Field to Detroit but recently withdrew its application.

Two commissioners of the Public Utilities Commission are now studying the application of the Michigan Natural Gas Corp. which seeks a permit to build a gas line from the Central Michigan Field to Saginaw, Bay City, Flint and Pontiac. A decision is expected at an early date.

A semiwildcat gas test in Broomfield Township, Isabella County, is to be started, about 1¼ miles east of the good gas wells in the Broomfield Pool. The test is to be drilled by Denslow and Jones on the Herman Cook farm, in the S half NE, Section 2, and rig is already on the ground. The test will have important bearing on the acreage of the field.

According to reports, Governor Wilber M. Brucker, has promised H. B. Johnson, E. S. Weidman, Floyd Mitchell and F. H. Goodrich of Mount Pleasant, that the matter of granting franchises to pipe line companies proposing to furnish various Michigan cities with gas from the Isabella-Clare Field, would be given early investigation. The governor said that, according to the representations made to him, there appeared to be no reason why a franchise should not be granted to at least one of the four concerns that have been besieging the Michigan Public Utilities Commission for orders of convenience and necessity. Several hearings have been held before the commission. When the last hearing was held, Kit F. Clardy, acting chairman of the commission, stated it would be the policy of that body to obtain the entire picture before acting on the application of any corporation or group of individuals. The commission has yet to set a date for a hearing on the petition of the Peninsular Construction Co., of Detroit, for a permit.

ANADARKO RATE CUT

A reduction from 60 to 50 cents a thousand feet was ordered by the Oklahoma Corporation Commission in domestic gas rates charged in Anadarko by the State Fuel Supply Co. effective with November bills. The application for the reduction was filed by citizens.

Texas Railroad Commission Hearing on the Lone Star Gas Company Rate

FORT WORTH, Tex., Nov. 7.—Dwindling earnings, competition from other fuels and the highest taxes in history, while its operating costs are cut to a minimum, was presented by the Lone Star Gas Co. at the hearing before the Texas Railroad Commission here.

The company, delivering gas to the gates of 253 cities in Texas and 26 in Oklahoma, had been ordered by the state to present facts to justify the gate rate of 40 cents per 1,000 feet charged the various distribution companies.

Chairman C. V. Terrell of the commission ruled that "as the legislature has required us to find and establish a correct gate rate it is up to the Lone Star Gas Co. to prove that their present rate is proper, if it can." Objections to the company being forced to present testimony first, made by Karl Griffith, Dallas, chief attorney for the utility, were overruled by Mr. Terrell.

Properties Involved

Testimony at the present hearing involves the following properties of the Lone Star Gas Co.: Producing wells and gas reserve leaseholds, 4,000 miles of transmission lines, three main compressor stations at Petrolia, Joshua and Gainesville, city gate measuring stations, warehouses, transportation equipment, central office of the company at Dallas, the cost of operation and depreciation on the properties.

The first witness placed on the stand by Mr. Griffith was D. A. Hulcey, chief company auditor.

The exhibits and testimony set up that the actual cost of the public service property of the Lone Star Gas Co., as reflected by the books on August 31 was $49,243,833. The amount of earnings for the year ending on that date, available for depreciation and return, was given as $4,134,947. This amount available for return figures at 8.39 per cent. This percentage of return, according to Mr. Hulcey, is 1.25 per cent less than for the year ending December 31, 1931. In fact, the witness testified, the earnings of the company have gradually been decreasing and may continue to drop.

The earning of $4,134,947, available for depreciation and return, which amounts to an earning of 8.39 per cent, does not take into account the legally allowed 5 per cent for amortization, it was pointed out. Subtracting the amortization percentage, this leaves the company an earning of only 3.39 per cent, which, the witness pointed out, is nearly 5 per cent less than the legally authorized 8 per cent return for a utility company.

Cost Figures

The witness said it is impossible to figure the cost of delivering gas to the gate of any one community because of the difficulty of apportioning the various cost items of the service to that one town, and the fact that the gas flows sometimes from one set of wells nearby and the next perhaps from wells many miles distant.

The service given by the holding company in exchange for 1 per cent of the gross revenue consists of the expert financial and legal advice rendered by L. B. Denning president of both concerns; George W. Crawford, chairman of the board, a market expert; Fred W. Crawford, his brother; T. B. Gregory, who has arranged the obtaining of $19,000,000 total in needed capital, and A. E. Mitchell, attorney, all of Pittsburgh, Pa. Also the services rendered by J. M. Simpson, Pittsburgh, purchasing agent for the Lone Star Gas Co. as well as for 16 other subsidiary gas companies owned by the Lone Star Gas Corp.

Valuation Figures

E. A. Steinberger, chief valuation engineer for the company, offered the record of an inventory of 3,958 units of property belonging to the Lone Star Gas Co., and set the property reproduction cost, new, at $73,927,635.

He pointed out that the cost to the company of furnishing information to Hawley, Freese & Nichols, appraisal engineers for the railroad commission, amounted to $65,890. There was an added cost brought by the hearings on the company of $27,890 in preparing exhibits for the hearing, to be used by Mr. Griffith and his witnesses.

Mr. Steiner set the total fair value of the Lone Star Co.'s public service producing and transmission properties in Texas and Oklahoma at $70,156,465 as of January 1, 1932. He said the properties are in 93.7 per cent new condition. Physical properties could be replaced new for $60,228,623, he testified, and the worth of the nonphysical properties is $13,699,012.

In arriving at the $13,699,012 in nonphysical items, the going concern value of the company was set at $7,499,077; a figure of $4,496,935 was allowed for certain preliminary and organization costs, and $1,703,000 was included for cash working capital.

The total natural gas reserve in proven acreage of the Lone Star Gas Co. was set at 416,975,837,000 feet by J. H. Dunn, Dallas, chief production engineer of the company. Of this total reserve 239,404,952,000 feet lie in the proven area of the Lone Star's Wheeler County holdings.

Frank E. Kendrick, Dallas, chief geologist, testified as to the methods by which he arrived at the totals of proven and unproven gas acreage owned by the Lone Star.

Mr. Dunn, a graduate of Texas A. & M. College in mechanical engineering, was questioned by Commissioner Smith and Laten Stanberry, director of the gas utilities division, in regard to experimental storage of gas in a natural reservoir in the nearly depleted Petrolia field of the company. He testified that the experiment had proved successful, that the company had completed three cycles of storing and returning the gas. He said the reservoir would hold about 650,000,000 feet. In computing the total gas reserves of the company, he had not included stored gas.

"Do you contemplate using the whole Petrolia field as a storage reservoir?" Stanberry asked. Mr. Dunn replied that this was a question for Lone Star executives to decide, that it depended upon many factors.

The Petrolia Field, whose gas is nearing depletion, according to the testimony of Mr. Kendrick, is the original field from which the Lone Star operated at the time of organization in 1909. Some of the original wells, however, still are producing gas.

Questioned by Commissioner Smith as to whether there is much waste of gas, Mr. Dunn replied that never had there been so little waste of gas as now. He said the open-flow test of wells had been stopped.

Chicago Mixed Gas Rate To Be Set for New Year

CHICAGO, Nov. 7.—The Illinois Commerce Commission has requested parties to natural gas rate cases in the Chicago area to have their evidence concluded by November 15 so that decisions can be rendered before the first of the year. These cases involve the rates to be charged by the Peoples Gas Light & Coke Co., Public Service Co. of Northern Illinois and Western United Gas & Electric Co. for the mixed natural and manufactured gas now being supplied by them. Most of the evidence submitted has been in the Peoples Gas case.

When natural gas became available to this area over a year ago, the commission ordered "temporary experimental" rate reductions of varying amounts, according to territory served and class of service, and has since been conducting hearings with a view to arriving at a permanent rate base under the new conditions.

Los Angeles Rate Hearing Before State Commission

LOS ANGELES, Calif., Nov. 5.—Natural gas supplies in districts tributary to Los Angeles are sufficient to meet the demands of the local basin for 20 years, John Franklin Dodge, petroleum engineer, testified before the State Railroad Commission in an investigation of the rates of the Southern California Gas Co.

The witness, who was called by the city, testified that the fields within the local basin make up a minor factor in supplying the requirements of the city, although, he declared, some of the gas now used for plant and field fuel purposes could be made available for use within the municipality if desired.

Herman Phleger, counsel for the Southern California Gas Co., attacked Dodge's testimony, dwelling upon the fact that storage facilities are meager in the city and that manufacturing plants are needed for stand-by purposes. The city and the commission contend that the cost of the stand-by plants should not be included in the rate base at the figures advanced by the company.

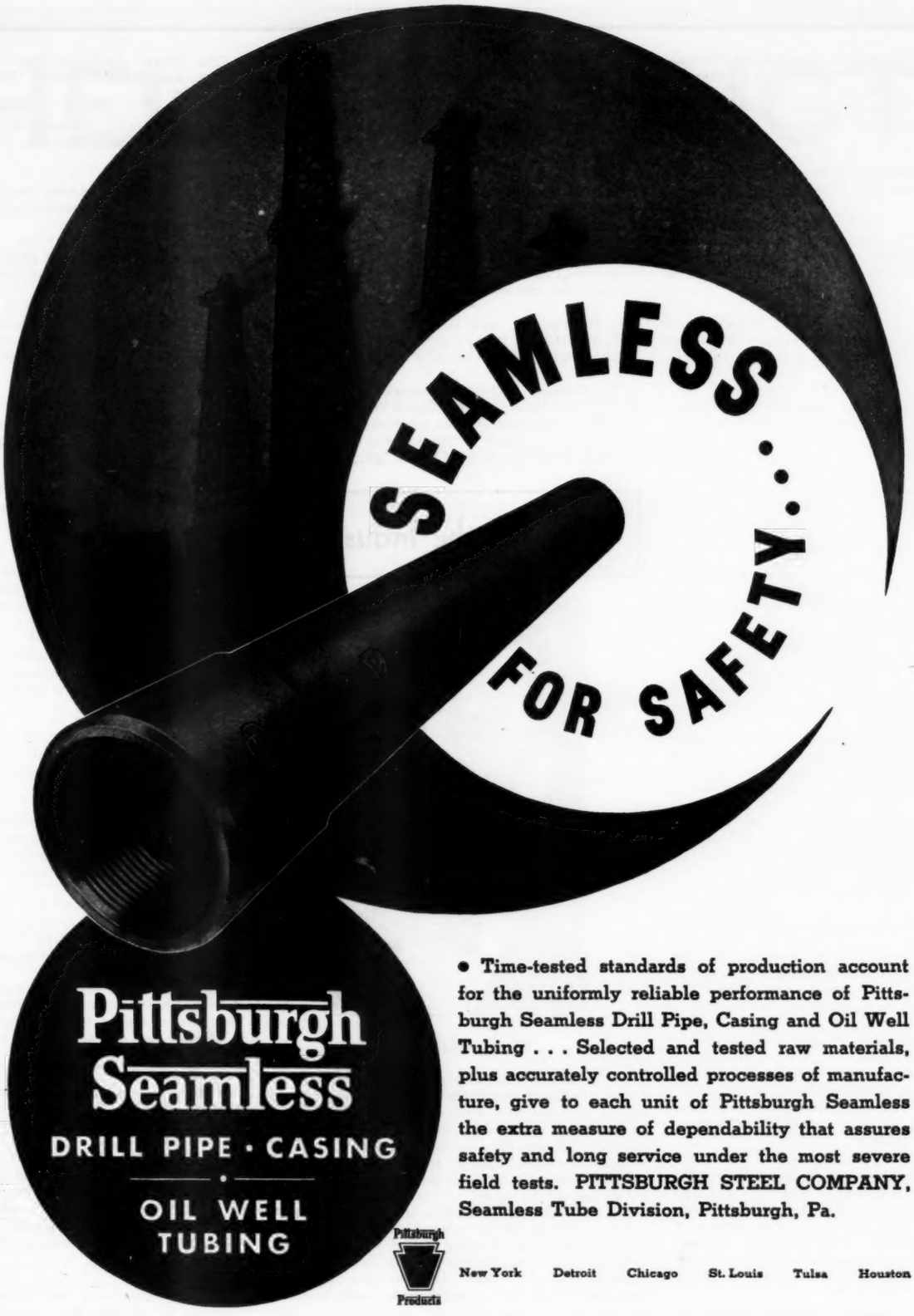
VAN WERT, OHIO, FRANCHISE

VAN WERT, Ohio, Nov. 7.—Charles Anderson, well known driller in the Coffeyville Field, Kansas, for some years, and later in Paulding County, Ohio, has been granted a 25-year gas franchise by the city council of Van Wert. Rates for commercial users are 50 cents per 1,000 feet for the first 50,000 feet; 40 cents for the next 50,000 feet and 30 cents for all above that amount. Artificial gas is now being distributed by the Van Wert Gas Light Co., which has a perpetual and nonexcluding franchise.

Mr. Anderson announced he planned to begin construction of a pipe line soon from two wells 8 miles north of Van Wert. He claims a daily production of 450,000 feet from the wells at natural flow. More wells can be drilled or gas from the Paulding County fields could be used, he said.

DALHART GAS RATE

DALHART, Tex., Nov. 7.—At a meeting with the Peoples Committee of Dalhart, Thomas J. Hutcherson, head of the Hutcherson Utilities Co., Kansas City, said this city could be given a 35-cent top in a natural gas rate schedule and that present electric rates could be cut 50 per cent through construction of independent plants and distribution systems.



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New York Detroit Chicago St. Louis Tulsa Houston

PERSONAL PARAGRAPHS

Joseph L. Adams of the Consolidated Oil Company of Ada, Okla., has recovered from an illness.

* * *

V. C. Fuller, purchasing agent, Gypsy Oil Company, has returned from a business trip to Houston, Tex.

* * *

W. J. Morris, president of the Continental Supply Company, St. Louis, Mo., visited the Tulsa district offices last week.

* * *

Harry W. Schuetz, assistant to the vice president of the Colona division of the Pittsburgh Screw & Bolt Company, Pittsburgh, Pa., spent the week in Tulsa.

* * *

C. A. Prichard, purchasing agent, Mid-Continent Petroleum Corporation, made a business trip to St. Louis, Mo., and other division points of the company, recently.

* * *

V. W. Bailey, purchasing agent of the Taubman Supply Company, was admitted to St. Johns Hospital, Tulsa, for surgical treatment and is making satisfactory progress.

* * *

Earl Kodyen, manager of drilling and production for the Zante Oilfields, Ltd., of Zante, Greece, is on a vacation at Petrolia, Canada. He will return to Greece in the near future.

* * *

L. W. Berry, manager of the Anglo-Ecudoriano Oil Company, of London, England, was in Tulsa during the past week. Mr. Berry is returning to his headquarters at Ancon, Ecuador.

* * *

R. E. (Bob) Allen, assistant California umpire, left by plane last week for Washington, D. C., to attend a meeting of the subcommittee on oil economics of the Federal Oil Conservation Board.

* * *

C. W. Hanley, scout and land man for the Gulf Production Company, Fort Worth, Tex., is convalescing from a fractured shoulder sustained in a car wreck on October 25 when scouting his district.

* * *

Walter G. Swaney, general manager of the Kerotest Manufacturing Company, Pittsburgh, Pa., was in Tulsa during the past week on business for his firm. He will visit Texas and California points before returning to Pittsburgh.

* * *

Frank A. Morgan, vice president of the Rio Grande Oil Company, the control of which was recently acquired by the Consolidated Oil Corporation, was elected president of the Pacific Coast section of the American Association of Petroleum Geologists at the annual election held in Los Angeles, November 4.

* * *

Ted Carter, petroleum engineer for the Magnolia Petroleum Company, Longview, Tex., is the newly elected chairman of the East Texas Engineering Society. Pat Regan, petroleum engineer for the Stanolind Oil & Gas Company, was named vice chairman. D. M. Collingwood, engineer for the Sun Oil Company, is secretary-treasurer.

* * *

Howard E. Rothrock, consulting geologist, formerly with Superior Oil Company of Delaware in charge of the geological, scouting and engineering department, has returned to Tulsa from a trip to the Gulf Coast and East Texas oil fields where he was making new connections to engage in drilling and consulting work. He will continue to reside in Tulsa.

* * *

Frank P. Fisher, formerly technical advisor to the Alberta provincial government and the Turner Valley Gas Conservation Board, has returned to Calgary from Chicago, where he acted as consultant to the city of Chicago in the recent gas rates case. Mr. Fisher's family has been spending the summer at Banff, Alberta, and he plans to leave with them shortly for the United States Pacific Coast.

Charles L. McMahon, of Tulsa, has gone to the Kilgore area, East Texas, to direct drilling in of a new well.

* * *

J. L. Shakeley, vice president, Frick-Reid Supply Corporation, has returned from a business trip to St. Louis, Mo.

* * *

Ralph Risser, of the Shell Petroleum Corporation's engineering department, has been transferred from Tulsa to Dallas, Tex.

* * *

C. M. Martin, southwestern oil field representative of Jenkins Brothers, has returned to Tulsa from an extended trip over the Southwest.

* * *

C. E. Whitney, sales manager, Baker Oil Tools, Inc., Huntington Park, Calif., was in Tulsa on a trip through the Mid-Continent fields.

* * *

T. J. Kelliher of Tulsa, treasurer of the Stanolind Oil & Gas Company, is spending a few days in Casper, Wyo., checking out the accounting system preparatory to moving it to Tulsa. He is being assisted by W. J. Dykeman of Fort Worth, Tex.

Men of the Industry

W. L. HOLMES

W. L. Holmes is another man who found after he had worked in the oil fields he could not leave them and be satisfied with work outside of the industry. He started as a roustabout for the Navarro Oil Company in 1897 and for two years worked at this, rig building and tool dressing. In 1899 he entered the insurance business in Corsicana, Tex., remaining in it two and a half years.

The oil business continued to interest Mr. Holmes, however, and in 1903 he entered the employ of The Texas Company in the office of J. S. Cullinan, Beaumont, Tex., serving the company in Beaumont and Houston, Tex. In August, 1912, he went with the Magnolia Petroleum Company, in Corsicana as cashier, and he has been with that company since that time, assigned to the general offices, moving to Dallas when the company moved its offices from Corsicana to Dallas.

Mr. Holmes was made assistant treasurer of the company, March, 1918, and on June 1, 1932, was elected treasurer. He is a Mason and a member of the Shrine.

Pat Lewis, Resistcor Engineering Corporation, Tulsa, has returned from a business trip to Houston, Tex.

* * *

Edgar A. Greve, representing the St. Louis Cordage Mill, St. Louis, Mo., was a business visitor in Tulsa last week.

* * *

P. W. Fenton, purchasing agent, Tide Water Companies, looked over company properties in the East Texas field last week.

* * *

George C. Schaffer, vice president, Blackmer Rotary Pump Company, Grand Rapids, Mich., was a visitor in Tulsa last week.

* * *

O. L. Stephenson, district superintendent in the Seminole area for the Gypsy Oil Company, is recovering from an emergency operation performed at Seminole.

* * *

W. T. Hardendorf was in Casper, Wyo., several days en route to his home near Golden, Colo., after an extended visit to the Soap Creek Field in Montana.

* * *

Luther H. White, of the J. A. Hull Company, has announced the arrival of a new geologist, Robert Clarke White, weighing 9½ pounds, at his home in Tulsa, November 3.

* * *

W. J. Dean, district superintendent of the Magnolia Pipe Line Company at Oklahoma City, Okla., will retire after 16 years' service with that company, December 1.

* * *

B. R. Emrick, technical adviser for the Burmah Oil Company, has left California for Texas and the Mid-Continent fields in his extended survey of American development methods.

* * *

H. L. Funkhouser and W. H. Starr of Fort Worth, Tex., were recent visitors in Casper, Wyo. Mr. Funkhouser was at one time located in Casper, Wyo., and Mr. Starr in Denver, Colo.

* * *

C. B. Le Flore, formerly drilling superintendent for the Iraq Petroleum Company, has joined the staff of the Burmah Oil Company, and is in London prior to proceeding to Burmah.

* * *

Anthony Vancouvering, Los Angeles, Calif., oil man, is the proud father of a new boy who, when he enters Stanford University some years hence, will be known as David Vancouvering.

* * *

Lloyd Holsapple, petroleum engineer for the Sinclair Prairie Oil Company, Longview, Tex., and Miss Elsie Mize of Checotah, Okla., were recently married in Monroe, La., and are now at home in Longview.

* * *

Frederic H. Lahee, chief geologist of the Sun Oil Company, attended the ninth annual meeting of the Pacific section of the American Association of Petroleum Geologists held in Los Angeles, November 3-4.

* * *

Ralph Harding Cummins, land man for the Southland Royalty Company, Fort Worth, Tex., and Miss Lorraine Barrett, of that city, were married at the home of the bride's parents on October 29, and left soon after for a honeymoon in Mexico, Cuba and Venezuela.

* * *

Clarke Deane, with the Owensboro, Ky., Gas Company for the past 2½ years, has left for Sioux Falls, S. Dak., to be commercial manager in the office of the Sioux Falls Gas Company, a part of the Associated Gas & Electric system which also owns the Owensboro Gas Company. Sam D. Whiteman, former manager of the Owensboro Gas Company, is manager at Sioux Falls. Mrs. Deane will join Mr. Deane in Sioux Falls after the holidays.

SHELL PRODUCTS

To individual and industry, Shell offers a complete line of petroleum products refined under the strict supervision of the most able petroleum technologists.

SHELL CRUDE OIL PRODUCTION

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Wood River, Ill.

FIELD PROBLEMS FROM READERS

Edited by Thomas F. Smiley

This department is conducted in order that men connected with the drilling, producing or transporting branches of the petroleum industry may obtain aid in solving problems that confront them in their work. Readers are invited to send questions freely. These questions will be placed in the hands of persons capable of answering them authoritatively, and the answers, based on the best available information, will be published.

Each question should give as much detail as possible, especially if it involves depth of sands, types of sands and operations on adjoining or nearby properties. The source of questions will be considered confidential, and only the initials of the sender will be published. Questions involving patented processes, intricate formulas or estimates of cost cannot be answered. If an immediate answer is important, one will be given by mail when the writer requests it.

In this connection, The Oil and Gas Journal will be glad to publish articles from field men who have devised new methods or improved old ones.

Giving Old Steel Storage Tank Bottom of Concrete

In cleaning one of our 55,000-bbl. storage tanks recently we found the steel bottom so badly pitted that a new bottom appears to be absolutely necessary. We do not feel that the expense of a new welded steel bottom is justified and are wondering if it would be practical to cover the old bottom with a 2 or 3-inch layer of concrete or a thick coating of some pipe enamel. It would be appreciated if you would give us some suggestions on the subject or refer us to someone who has had experience with such work.—G. M. V.

Questions much similar to this have been received by this department before, and for general information on the subject it is suggested that you refer to answers given on the Field Problems page in The Oil and Gas Journal of November 6, 1930, and of March 26 and April 23, 1931. Two of these discussions deal specifically with the subject of casting concrete bottoms for steel-sided reservoirs that will rest directly on the earth instead of on an old steel bottom.

Your attention is called particularly to U. S. Bureau of Mines Bulletin No. 155 by C. P. Bowie, entitled "Oil-Storage Tanks and Reservoirs," in which you will find information about concrete reservoirs, part of which can be applied to your problem.

In repairing steel tanks by the use of concrete bottoms it is essential that the concrete mixture used be impermeable against oil seepage and absorption and this is best assured by taking adequate precautions against the formation of cracks in the concrete after it has been placed, and by selecting materials to produce a mixture of maximum density and minimum porosity.

J. F. Hough, assistant manager of the structural and technical bureau of the Portland Cement Association, Chicago, Ill., has offered some good advice on the best methods of producing such a mixture and the following is quoted from a letter from him on this subject.

"It is suggested that the concrete should be of a designed mixture with not more than 6 gallons of water per sack of cement, which amount of water includes the moisture contained in the aggregate. The mix should be workable and plastic. As a trial proportion the following mixture is suggested:

	Maximum size of aggregate	
	1-inch	2-inch
Trial mix	1-2¼-3¼	1-2¼-4

"These mixes should give a 1-inch slump.

"It may be necessary to modify these proportions slightly to attain workability, which should be done by changing the amount of coarse aggregate. The specified amount of water (6 gallons per sack of cement) should be held constant."

In casting a concrete bottom in a steel tank there may be some shrinkage around the perimeter of the concrete slab that will cause it to pull away from the steel sheet forming the sides. This space can be packed with oakum rammed into place as tightly as possible before the tank is filled with oil the first time.

In his work on "Petroleum Production Engineering," L. C. Uren says it has been shown in experimental tests conducted by the U. S. Bureau of Standards that properly proportioned and prepared concrete is practically impervious to all but the lighter oils. Seepage and absorption losses through concrete linings are found to be negligible for oils below 35 degrees gravity. Losses of kerosene and gasoline in concrete containers, however, may be appreciable; and this type of storage is not to be recommended for the lighter oils and distillates unless the concrete surfaces exposed to the oil are given an oil-proofing treatment.

For this purpose, silicate of soda (water glass) of 40° Be. density (Baume scale for liquids heavier than water) diluted with from 1 to 3 parts of water and applied in three coats at 24-hour intervals, has been found effective, though it is not a permanent coating. Spar varnish thinned with 20 per cent of "volatile mineral spirits" (a petroleum distillate intermediate between commercial kerosene and gasoline), and applied under a pressure of 60 pounds per square inch with a paint gun, is probably more effective. This preparation is also applied in three coats at 24-hour intervals using approximately 1 gallon to each 200 square feet in each coat.

For oil proofing concrete fuel oil tanks, the Bureau of Yards and Docks of the U. S. Navy Department specifies two coats of spar varnish or glutrin preceded by one coat of 7½ per cent solution of calcium fluo-silicate (about 1 gallon of the latter to each 100 square feet).

Petroleum apparently has no detrimental effect upon concrete once it has properly set and hardened; but some engineers do not consider it good practice to place oil in contact with concrete until it is six weeks old. If necessary to place the tank in service earlier than this, it is suggested that the inner walls be given a protective coating of one or another of the oil proofing compounds mentioned above, so that the hardening of the concrete may proceed without danger of its being deprived of its moisture content. The necessity for this practice is questioned by some authorities.

The foregoing information about oil proofing cement is given here because conditions may arise that might make it necessary to take such precautions, but if the steel tank bottoms are not full of holes it is quite probable that you can cast a tight concrete slab over them if a good mixture is used.

With the information given here it is quite probable that you can give instructions to a concrete worker that will enable him to make you a good tank bottom.

Addresses of Geologists May Be Obtained From Association

I would like to have a list of the geologists of oil companies operating in Texas and adjoining states. Can you tell me how to obtain such a list?—M. G.

Write to the American Association of Petroleum Geologists, Tulsa Building, Tulsa, for the March, 1932, issue of the association's bulletin. This issue contains the names and addresses of all members of the association. It costs $1.50.

Why Was It Called That?

TAKING UP THE SLACK

"Taking up the slack" is the expression used by drillers in alluding to the practice of relieving the stress on a long string of casing after it has been landed on bottom. The operation is accomplished by pulling the casing string upward slightly, literally taking up the slack. A string of casing 3,000 feet long can be pulled up 12 to 15 inches at the top before it clears the bottom, Walter H. Jeffery says in his book, "Deep Well Drilling," and a string 8,000 feet long would elongate about 40 inches before it would clear. The casing then is hung on a heavy casing clamp which rests on the next larger size casing. The casing then settles gradually to a permanent seat and the great strain of its own weight is distributed between the clamp at the top and the seat on the bottom. Some operators use clamps on every string of casing, thus putting upon the larger sizes and shorter strings part of the weight of the inside heavier strings.

Dressings That Prevent Slipping Without Damaging the Belt

Is there some kind of dressing that can be put on a leather belt that will make it hold the pulley, that is, keep the belt from slipping on the pulley, but that will not injure the belt? I have heard of different things to put on, such as soap and rosin, but I don't care to use any of them without knowing what effect they may have on the belt. How often should a belt dressing be put on?—G. F. D.

Belt dressings usually are designed to relubricate the leather fibers or to make the belt stick to the pulley. Good lubricating dressings should make the other kind unnecessary.

Various substances may be used as lubricating dressings for belts without danger of damaging the leather. The "Treatise on Leather Belting" by George B. Haven and George W. Swett says on this subject:

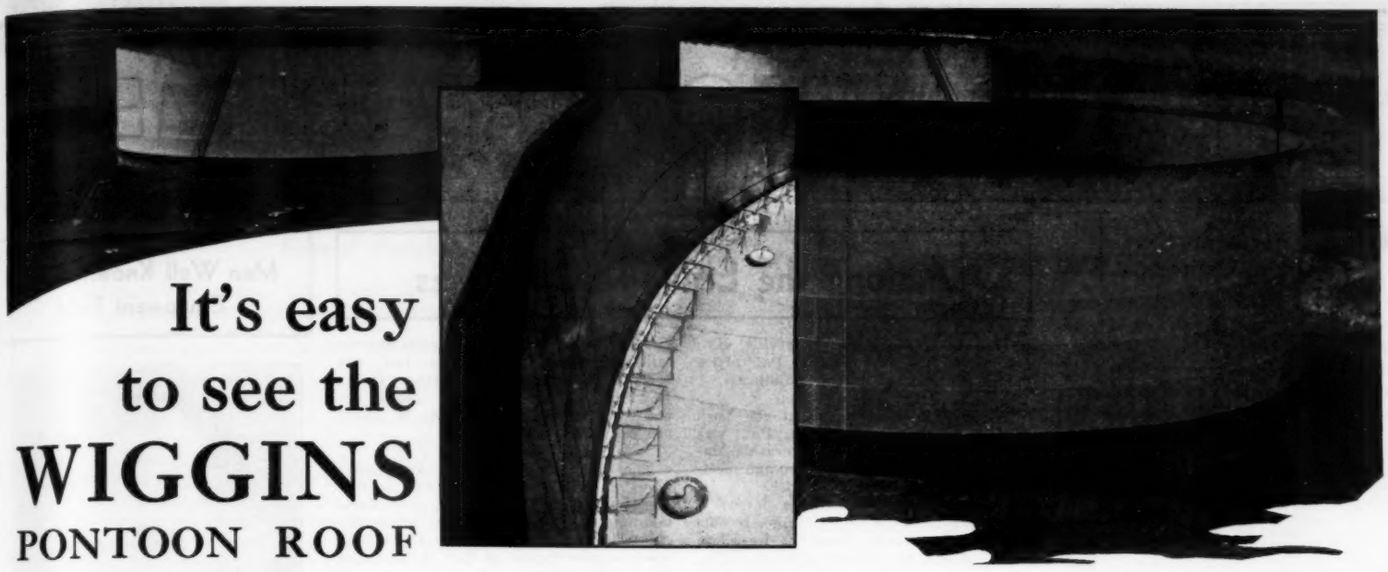
"The best belt dressings are made from those lubricants used in the currying of leather for belting. Cod oil and tallow warmed together form a paste which can be swabbed on the belt. Neatsfoot oil is considered a very desirable oil for leather and is used extensively as a belt lubricant. Castor oil is good only if a high quality of medicinal oil is used. Otherwise the oil will become rancid and break down, producing acids which will rot the leather. Any of these materials when properly and regularly applied will greatly increase the life of the belt and maintain its pulling surface. Lubricating dressings aim to maintain on the surface of the belt the same unequaled gripping surface which is found in the palm of a man's hand when it is warm.

"There are numerous dressings put on the market, many of which help and some of which harm the belt. The dressings produced by belt manufacturers can be recommended as a rule, because a reputable belt manufacturer is careful not to use anything in his dressings which would be injurious to belts.

"Belt dressings are put up in liquid, paste and stick form. Liquid can be easily applied. Care should be taken not to apply so much that the belt becomes soggy and loses its lateral stiffness. The paste dressing can be heated and swabbed on the belt, or can be put on cold and the belt allowed to stand over night or preferably longer until the greases are absorbed by the leather. Stick dressings are made so that they can be applied to both sides of double belts, as the layer of cement between the plies will not permit the dressing to work from one side to the other.

"The best results are obtained from using small quantities of dressing frequently and at regular intervals. A properly dressed belt feels mellow, but not greasy. The intervals between dressings vary according to local conditions from a very few days to several months. A new belt should be dressed frequently until a prime pulling surface has been produced. One pound of the average dressing of the paste type will cover 40 to 100 square feet of belt surface, depending upon the condition of the belt.

"It is common practice in factories where belts are heavily overloaded to rub the surface of the belt with ordinary brown soap or to throw powdered rosin on it. The only time when there is any excuse for using dressing of the sticky type is when in an emergency a shutdown will cost more than possible damage to or total destruction of the belt."



It's easy to see the WIGGINS PONTOON ROOF from the right point of view

At a glance you would think none of these tanks have roofs. As shown in the close-up, however, the Wiggins Roof in each case is down at the oil level, doing its job of protecting the lighter fractions from evaporation.

If you only gave passing thought to the subject, you might dismiss the Wiggins Pontoon Roof as "a very ingenious gadget." But it has a much fuller significance to any oil man who focuses his attention on reducing the loss in oil storage tanks. He can easily see the advantage of stopping evaporation in this simple way and the big additional value of reducing the fire hazard in such tanks.

Our nearest office has data that will help you "see" the Wiggins Roof better. Write for information and quotations on roofs for new or old tanks.

OFFICES:

Dallas	1241 Burt Bldg.
Houston	2919 Main Street
Tulsa	1406 Philcade Bldg.
Birmingham	1536 Fiftieth St. N.
Chicago	2128 Old Colony Bldg.
Detroit	1514 Lafayette Bldg.
Cleveland	2204 Midland Bldg.
New York	3147 Hudson Terminal Bldg.
Philadelphia	2615 "1616" Walnut St. Bldg.
Boston	1517 Consolidated Gas Bldg.
San Francisco	1054 Rialto Bldg.
Seattle	4323 Smith Tower
Los Angeles	1423 Wm. Fox Bldg.
Havana, Cuba	Apartado 2507

CHICAGO BRIDGE & IRON WORKS

PLANTS AT BIRMINGHAM, CHICAGO and GREENVILLE, PA.

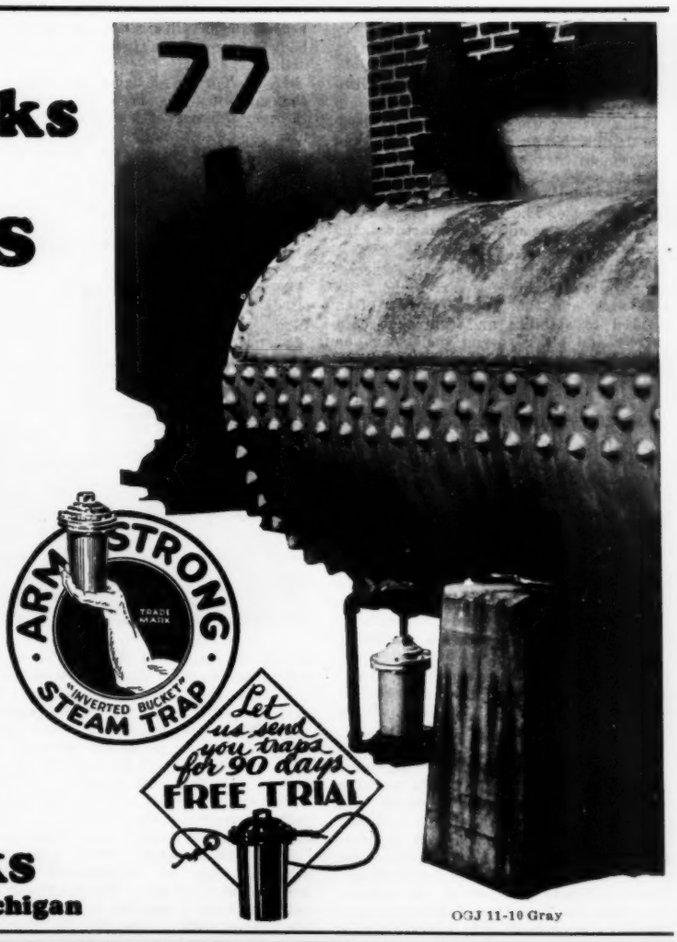
Drain water from Compressed Air Tanks with dependable ARMSTRONG TRAPS

When air receiving tanks are drained by Armstrong Traps, as shown in the accompanying illustration, there is no chance of moisture in the air supply and the cost of manual operation of the drain valves is eliminated.

Most refineries have standardized on Armstrong Traps for steam applications. The same dependable service is available on compressed air lines. The fact that the traps cannot airbind in regular steam service is a positive indication of their ability to drain water and oil from compressed air. No equalizing lines are necessary—simply screw the Trap on the end of the line to be drained.

The common applications of Armstrong Traps in air service are at all tanks, at drip points, on long lines, and with air separators at the compressor plant or near the air using equipment.

The Armstrong representative in your territory will gladly discuss any application on compressed air service that you have in mind.



ARMSTRONG MACHINE WORKS

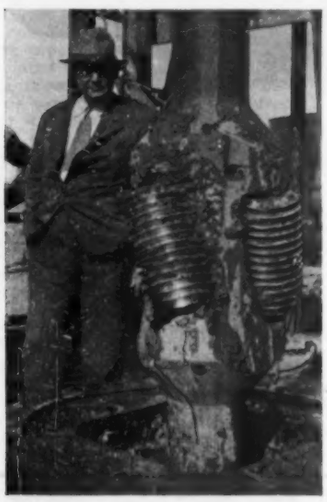
868 Maple Street **Three Rivers, Michigan**

OGJ 11-10 Gray

NEW AND IMPROVED EQUIPMENT

Reamer Performs Several Jobs in California Well

The 24-inch Sievers reamer in the accompanying picture is shown as it looked after being used by the North Kettleman Oil & Gas Co. in Kettleman Hills, Calif. Instead of imparting a knurling, chipping action, the reamer operates on the principle of a disc harrow. Besides being a



reaming tool, it is used as a drilling guide, offering an effective method of stabilization.

This reamer was located 40 feet above the drilling bit as a stabilizer, guide and hole conditioner and as a safety factor against twistoffs. Standing beside it is Mr. McAdams, of the North Kettleman Oil & Gas Co. The Security Engineering Co., Whittier, Calif., manufactures the reamer.

To obtain a first-class core it is necessary to rotate the core-barrel about its true axis, and the Sievers reamer often is used to stabilize and centralize core barrels and other special tools, such as formation testers, tools used for ratholing, impression blocks, etc.

ELIMINATES SCALE AND RUST

The laboratories of D. W. Haering & Co., 565 West Washington Boulevard, Chicago, have developed a chemical formula for controlling corrosion and eliminating scale and rust from hot water lines and heaters. This material, according to the company, does not coat the piping but controls corrosion by attacking the fundamental causes. It combines directly with oxygen, forming a stable compound and thus removes oxygen as a factor in corrosion. Carbon dioxide is adsorbed on the surface of the colloid while scale-forming particles are maintained as suspensoids. The material is easily adjusted for pH control. It is marketed under the name "H-O-H."

Dr. Willis Rodney Whitney, organizer and for 33 years director of the research laboratory of the General Electric Co., retired November 1 from that position owing to poor health. Through appointment by Gerard Swope, president of the company, Dr. William David Coolidge, senior associate director of the laboratory, succeeds him. Doctor Whitney continues as vice president in general charge of research.

Among the Equipment Houses

The Henry Vogt Co., Louisville, Ky., has moved its Philadelphia, Pa., office to the Commercial Trust Building.

—

W. S. Shipley, president of the York Ice Machinery Corp., York, Pa., was elected president of the Refrigerating Machinery Association at its annual meeting in Detroit, Mich.

—

The Naylor Pipe Co., Chicago, recently received an order from the Le Flore County Gas & Electric Co., Poteau, Okla., for 16 miles of 6-inch Spiralweld Toncan iron pipe in 40-foot lengths. This pipe will be used on a high-pressure trunk natural gas line from Red Oak, Okla., to the purchaser's main line.

—

Foote Brothers Gear & Machine Co., Chicago, has appointed C. H. Taylor, Johnson Building, Charlotte, N. C., as IXL representative in South Carolina and the western part of North Carolina.

The New York office of Roots-Connersville-Wilbraham, Connersville, Ind., has been moved to 24 State Street. D. L. Dowling, district manager, heads the staff. N. C. Barnard and A. E. Lloyd are associated with him.

—

The Maintenance Engineering Corp., Houston, Tex., has been chosen to represent the Emil Greiner Co., New York, manufacturer of instruments, laboratory glassware and apparatus. R. E. O'Neill, sales representative of the Maintenance Engineering Corp., will have charge of this account.

—

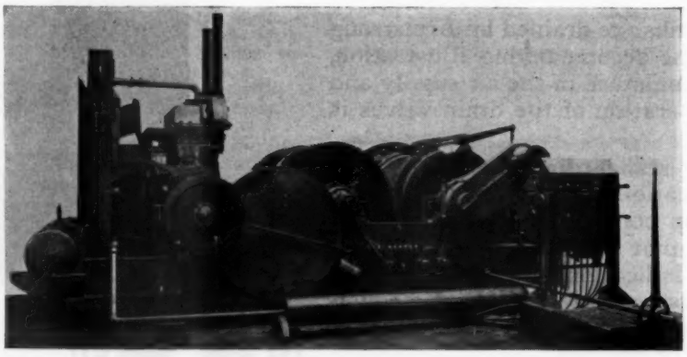
H. W. Rinearson, vice president of sales for the A. M. Byers Co., Pittsburgh, Pa., announces the appointment of W. A. Taylor as division manager in charge of the Chicago office of the company. Mr. Taylor, formerly assistant manager, replaces M. G. Henderson who resigned.

Turner Drawworks Speeds Up Deep-Well Drilling

A new drawworks which is said to speed up drilling and cut the per-foot cost of drilling wells has been introduced on the Pacific Coast. The Turney all gear-driven drawworks, shown in the accompanying illustration, is said to embody features urgently needed in oil well drilling.

H. L. Turney, designer and builder of the machine, has been identified with the manufacture of heavy machinery for many years, especially with heavy logging machinery. Many of the principles involved in these heavy logging machines have been embodied in the Turney drawworks; such, for example, as the patented speed changing feature.

The Turney drawworks has four line speeds. By means of its variable speeds a patented feature, the operator or driller can increase or reduce the speed of the drum instantly while under full load and with the engine running at high speed, without shock or jar to the hoisting line. This is accomplished by a series of specially designed air-operated clutches which are controlled through one control valve, permitting the operator to select any drum-speed desired while hoisting.



The drum is equipped with a specially designed type of air-operated "post" brake, controlled by a Westinghouse air valve, making it possible to apply or set the brakes with a variable air pressure of a few pounds to full tank pressure, resulting in a smooth stop of the drum, or accurate feeding off of the line when drilling. The line speed of the drum is variable, from 300 feet per minute in low gear to 2,200 feet per minute in high gear.

The table drive is equipped with air-operated band clutches of the same type as that used in the transmission, and can be reversed instantaneously under full speed and load. The speed variation of the table is from 15 to 150 r.p.m.

Cut-steel gearing is used throughout the machine. All shafts run in large roller bearings. The machine illustrated is designed for deep drilling, and is powered with a 350 h.p. Waukesha natural gas engine, although either steam, electric or Diesel power may be used as desired. A smaller unit for shallower wells will be produced in the near future, and the two sizes are said adequately to meet the requirements for drilling to all depths. Advantages claimed for the Turney drawworks are that it is compact, and a complete drilling unit that can be moved from one location to another at a marked saving in time and money; that it speeds up drilling, running-in and pulling out, and effects important savings in drilling costs. Detailed information regarding the machine and its operation may be obtained by addressing H. L. Turney, 2740 East Thirty-seventh Street, Los Angeles, Calif.

Men Well Known in the Equipment Field

WILLIAM C. DREYER

William C. Dreyer, general engineer of the Westinghouse Electric & Manufacturing Co., East Pittsburgh, Pa., was born in Boston, Mass. He attended the Glendale Union High School, Glendale, Calif., and the California Institute of Technology, obtaining a degree of B.S. in electrical engineering from the latter in 1924. While at California Tech he was elected to Tau Beta Pi, an honorary engineering society.

Mr. Dreyer served in the U. S. Navy from 1917 to 1919. He was then transferred to the army transport service, where he served until 1920.

Upon graduation from California Tech, Mr. Dreyer entered the Westinghouse company's graduate student course in East Pittsburgh. Upon completing it he entered the general engineering department, in which he has remained since then. His activities include the engineering of pumping and drilling equipment for wells, pipe line pumping and refinery electrification.

Mr. Dreyer is a member of the A.I.E.E. Society and the author of the article, "Flexibility of Electrical Drives for Pipe Line Pumping," published in the September 29 issue of The Oil and Gas Journal. He enjoys golf and swimming.

SUN ADDS MODERN FACILITIES

The Sun Shipbuilding & Dry Dock Co., Chester, Pa., which has been building pressure vessels, condensers, plate work, special machinery, etc., for oil refineries, has added to its shop equipment modern facilities for fabricating A.S.M.E. code Class 1 vessels. These include an X-ray inspection outfit, a large annealing furnace for stress-relieving welded vessels and special tables for handling vessels while being welded. The stress-relieving furnace has a capacity for vessels 17 feet in diameter and 80 feet long, with arrangements for much greater lengths. The company recently was placed on the Hartford approved list for any thickness of welding. Its welding process is known as "Sunweld."